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MEET THE CASA WINGS AWARDS WINNERS!

AVIATION'S BIG SHOW

What's coming to Avalon in 2025?

JIM DAVIS

The dangers of flying low

MARCH-APRIL 2025

KODIAK MOMENT

What's it like to fly the Kodiak 100?

Level up! Step into a big twin

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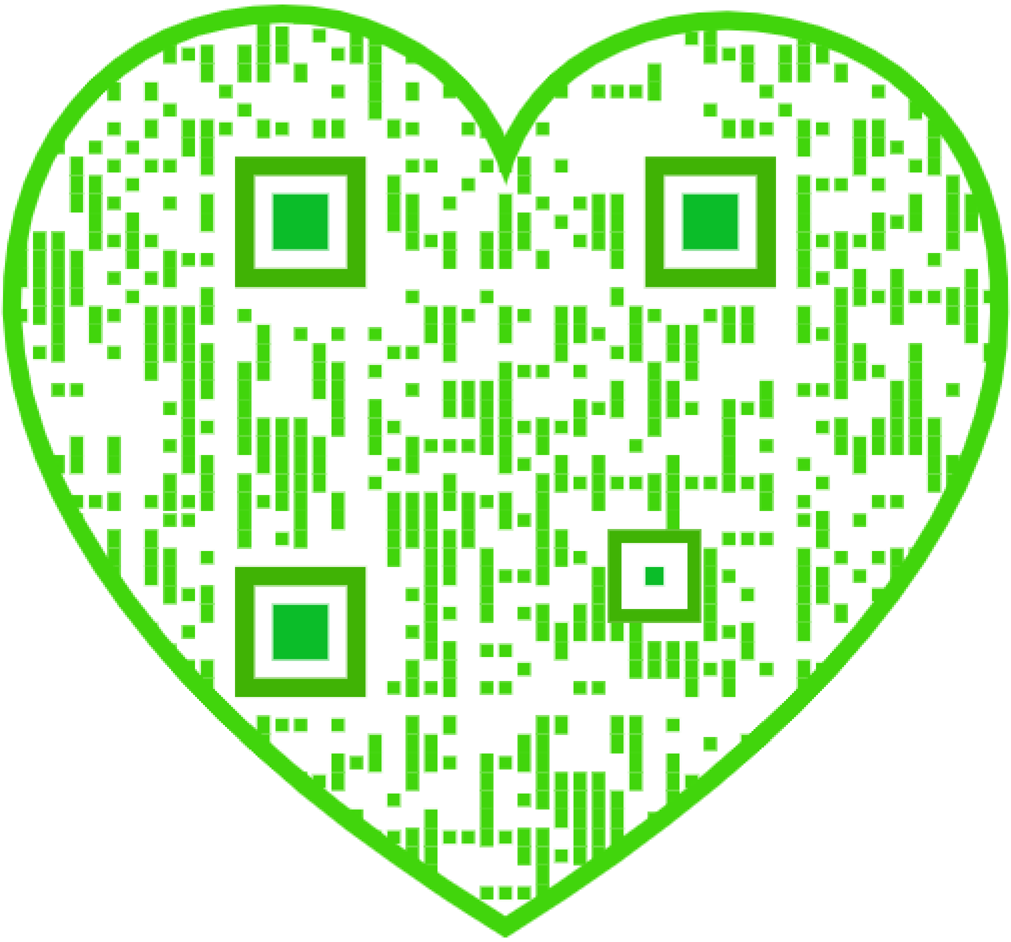

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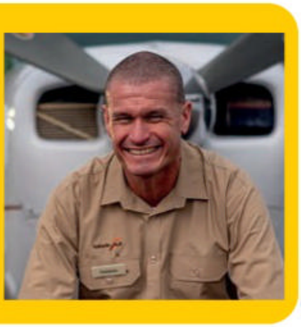

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Cover: Filip Modrzejewski flies the Kodiak 100

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At the time of writing, a terrible fatal crash in Washington, which killed 69 people, is all over the news. Recently re-appointed president Donald Trump has blamed diversity, equity and inclusion (DEI) policies for the fatalities.

A Right Wing and a Left Wing

Now, anyone who has experienced aviation knows the chances of the pilot being a straight white man are pretty high. Internationally, fewer than 6% of pilots are women; 3.4% of US airline pilots are Black and 2.2% are Asian.

In Australia, around 10% of pilots are women. There are just 38 female pilots in the RAAF, representing just 5 per cent of the 752 pilots in the air force. And a mere 2 per cent of Australia's aeronautical engineers are women.

I'm pretty certain that DEI was not the cause of the crash, and blaming this awful accident on diversity is a long and fantastical bow.

As a woman in GA, I've written plenty about how we can encourage more women into aviation; this editorial is not about that.

What's been going around in my head is not that fewer accidents would happen with a gender and diverse background uptake; rather, it's the change in tone perpetuated by Trump and echoed here in Australia. I've noticed over the last few months a subtle but alarming change in the way the world is being viewed. On social media, in particular, there is a trend towards blame, partisan politics and a general lack of kindness.

I've long been aware that I, myself, am not a typical poster-girl pilot. I'm quirky, left-wing, I'm more creative than practical and I wholeheartedly believe climate change is real.

I have bright red hair, tattoos and drive a funny little vintage car. I am the parent of 3 queer adult children, 2 of whom are transgender and autistic. I live in the latte-belt of Sydney, behind the hipster-proof fence, and most of my friends are artists and writers.

However, this has never stopped me engaging with and being friends of people who hold different views from me. Some of my favourite people in aviation are diametrically opposed to me, politically and culturally.

Yet, recently, I've noticed an increasing intolerance of differing points of view. I've started seeing a trend towards name-calling and accusations of 'a woke mind virus'. This is coming from pilots I've been connected with on social media for years and it concerns me because GA is my home; it's where I belong and where I feel safe.

I've always loved the fact that I feel a sense of belonging in the aviation community; that my being quirky has been embraced by others in the community as 'charming' at best and 'unusual' at worst. It has seldom been a wedge between me and largely straight white men I've flown with, interviewed or trained alongside, because those men are diverse in their own way (some are farmers, some are doctors, some have hobbies such as building their own flying machines from scratch) and they're sometimes a little quirky themselves.

My passion for aviation, which is my only real hobby as well as my career, has been built on the generosity of the people in GA. When I flew solo around Australia, all manner of members of our community looked out for me, put me up and offered advice. Every time I've stumbled, I've depended on the kindness of other pilots and aviation professionals.

I write this as the Avalon Airshow is approaching. My love for airshows is palpable: the coming together of the community, catching up with colleagues and immersing myself in all things aviation is what I look forward to throughout the year.

I'm hoping that the current change in attitude is merely restricted to social media, shock-jock podcasters and clickbait articles, and that in real life our community remains as inclusive and robust as ever. After all, an aircraft needs both and right and a left wing.

So, if you see a middle-aged woman with bright red hair, come and say hello. Let's talk about aeroplanes, our best and worst landings and what the future looks like for GA. I promise I won't infect you with the woke mind virus!

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News

The board of Airservices Australia has appointed Rob Sharp to the position of permanent Chief Executive Officer.

Airservices Appoints New CEO

Sharp had been interim CEO since May last year when the board elected not to review the contract of then CEO Jason Harfield.

Airservices chair John Weber said Sharp's performance in as interim CEO was a factor in the decision to appoint him permanently.

"Since joining Airservices as Interim CEO in July 2024, Rob has demonstrated exceptional leadership in enhancing the organisation's operational performance and laying the foundation for long-term financial sustainability," Weber said.

"Under his guidance, Airservices has made significant strides in delivering improved outcomes for the aviation industry and the travelling public.

"Rob's extensive experience across the aviation and transport sectors, coupled with his deep understanding of stakeholder engagement, has already proven invaluable.

"The Board is confident that his expertise and vision will continue to drive the organisation forward as we navigate the opportunities and challenges ahead."

Sharp is a former CEO of both TigerAir and Virgin Australia, and Secretary of Transport for NSW.

Former CEO Jason Harfield's term expired on 8 March last year, and only the day before the Airservices board told him his term would be extended to 8 June. However, on 17 April, he was told cabinet had decided not to re-appoint him.

The Department of Infrastructure, Transport, Regional Development, Communications and the Arts has declined to give reasons for Harfield not being re-appointed, citing "limitations around sharing information relating to cabinet processes".

Former Virgin Australia and TigerAir CEO Rob Sharp is now the permanent CEO at Airservices Australia.

(AIRSERVICES AUSTRALIA)

SCHWARTZ FAMILY BUYS SYDNEY SEAPLANES

According to Greens Spokesperson for Transport, Infrastructure and Sustainable Cities, Elizabeth Watson-Brown MP, Harfield was not reappointed because of pressure over noise complaints, particularly from Brisbane.

Schwartz Family buys Sydney Seaplanes

Sydney's iconic Sydney Seaplanes has been sold to the Schwartz Family Company (SFC), headed by hotels and hospitality mogul Dr Jerry Schwartz.

BELOW: Sydney Seaplanes will be wholly owned by Schwartz Family Company by the middle of this year.

(SYDNEY SEAPLANES)

In an announcement made today, SFC said that has initially bought majority ownership in Sydney Seaplanes, with plans for full acquisition in the middle of this year.

SFC has bought the shares from founder Aaron Shaw and fellow shareholder Ken Gaunt.

The purchase also includes the Rose Bay headquarters for Sydney Seaplanes and the adjoining Empire Lounge restaurant, bar and function venue, which is being rebranded as Sydney Seaplanes Lounge.

SFC will add Sydney Seaplanes to their aviation business, which also includes Blue Sky Airways, Newcastle Seaplanes and the Darling Harbour Helipad.

"My purchase of Sydney Seaplanes represents an exciting new chapter in Sydney's aviation and tourism history," said Dr Schwartz.

"Rose Bay was the arrival point for the famous Qantas flying boats that opened up the 'Kangaroo Route' back in 1938, and I'm proud that we can con continue the seaplane tradition by providing inspirational tours of Sydney Harbour and flights to picturesque locations along the coast.

"Just as anyone arriving on the massive seaplanes decades ago never could forget their arrival into Sydney, we want to ensure that every passenger has an unforgettable flight experience with us.

"Back in the 1930s, arriving by seaplane in Sydney was the ultimate in luxe travel. We are reliving that by offering indulgent packages in combination with the Sydney Seaplanes Lounge, which has one of the most enviable waterfront locations in Sydney."

Sydney Seaplanes' fleet currently comprises two amphibious Cessna Caravans and a de Havilland DHC-2 Beaver. A second Beaver, currently owned by Dr Schwartz, is being converted to an amphibian and is expected to join the fleet shortly.

Sydney Seaplanes was founded by Shaw in 2006 after the merger of five tourist operations including Sydney Harbour Seaplanes, Southern Cross Seaplanes and Seaplane Safaris.

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Editor's Pick

CASA Says No – Where Are Their Core Values?

I am currently facing a troubling and seemingly unfair decision from CASA, and I believe the aviation community needs to be aware.

For years, I have held a CASR 61.040 approval, allowing me examination privileges for the SA227 Metroliner, Beechcraft B1900 aircraft types, and ATPL. This approval has been reissued multiple times as I've consistently met all conditions.

Last year, I applied and paid the required fee to renew the approval. After waiting five months, and just before Christmas, the manager of the flight testing office unilaterally decided not to reissue it. He claimed that he believed he had the discretion to deny the renewal. No show cause notice or a legal statement of reasons. Instead, I was told I could either undergo the costly Flight Examiner assessment process for each approval ($30,000 +) or escalate the matter to the Administrative Appeals Tribunal (AAT).

This all takes an enormous amount of time and money. Two commodities CASA has an abundance of. CASA counts on the complainant giving up for these very reasons.

This decision has left me unable to issue type ratings—something I've been doing since the late 1990s, with over 100 type ratings issued for the Metro and B1900.

CASA claims fairness and integrity as core values, but is it fair to jeopardise livelihoods without due process? Where is the integrity in a decision that lacks transparency and accountability?

CASA is a bully. CASA's action, or in this case inaction, has noting to do with regulations or safety. It's personal. For reasons known only to him, he has decided not to reissue my approval.

This issue is ongoing, but I feel it's important to raise awareness now. To others holding a CASR 61.040 approval: beware—this could happen to you.

Grahame Murray

Winner!

Grahame Murray will receive a Bon Bon Snoopy worth $54.99! The world-famous dog gets a well-deserved spot on the Bon Ton Toys Wall of Fame. And as if it couldn't get any better, they also welcome his little yellow intellectual friend Woodstock. Together they are the basis of the Peanuts Collection.

Peter has flown 17 different LSA aircraft as he went through the process of deciding which to buy

Too Many Cowboys!

Well said! (Winged Win, *Australian Flying* Nov/Dec 2024).

I'm a low hour LSA pilot. Despite low hours, I've flown 17 different LSA aircraft as I went through the process of deciding which to buy.

I was very unimpressed with most schools by their attitude, aircraft standard & the adherence to regulations & standards. I have been fortunate to meet a couple of standouts, which showed up the rest in a pretty poor light.

Like you, I've been out of flying for a couple of years & have a BFR due in September. I'm trying to decide what aircraft I'd like to use to do a refresher course with, followed by a BFR.

I have a very short list of aircraft I really want to try. I've sold my FK9 & need a replacement. Where to go? The cowboys outnumber the others 10:1. Who to take advice from? Talking to RSAus about anything is a waste of time.

Peter Robinson

> «Where is the integrity in a decision that lacks transparency and accountability?»

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Celebrating Excellence

The CASA Wings Awards celebrate the achievements of exceptional individuals and organisations in the general aviation sector. **Kreisha Ballantyne** meets the winners.

Australian Flying is proud to announce the winners of the 2024 CASA Wings Awards. The CASA Wings Awards recognise the achievements of flyers, instructors, clubs and services in general aviation. CASA, the Australian Division of the Royal Aeronautical Society and *Australian Flying* congratulate the following award winners.

Cameron Marchant, winner of the Col Pay Award for Lifetime Service to GA

CAMERON MARCHANT

Col Pay Award for Lifetime Service to General Aviation

Winner: Cameron Marchant

Cameron has approx 22,000 hrs fixed wing/2,500 hrs rotary wing. He holds ATPL (A and H). Flight Instructor Rating (Aeroplane) with virtually all training endorsements. He also holds a Flight Examiner Rating and has recently been acknowledged by HCAP as a Master Air Pilot.

Cameron commenced flying in 1991 at Archerfield, via a Griffith University degree programme. His initial experience was gained via charter in QLD and NT, leading to an instructor rating mentored by the late Humphrey Maltman at Flight Training Australia.

> **Cameron focuses on providing first-job pilots with the opportunity to develop and grow**

Deciding against pursuing an airline career, he joined the Australian Army as a reconnaissance helicopter pilot, serving in 161 Recce Sqn as pilot (later Troop Commander) on deployments to East Timor during the United Nations UNTAET mission. Also much flying in PNG training mountain flying.

In 2006, Cameron left the Army to dedicate his career to pilot training and development. His first role was as alternate CP and HOTC at Vincent Aviation in Darwin, with some duties training pilots in their New Zealand base.

In 2008, he relocated to Cairns as alternate CP and HOTC for Skytrans, assisting in developing their Dash 8 capability, focussing on the development of their full-flight simulator training processes. Two years later, he moved to ChartAir, 2010–CP/HOTC, developing the company from small-time GA operation to a range of operations, including the traditional single-engine piston charter through to the addition of turbine operations (C208 and C441), low capacity RPT and a dramatic improvement in the delivery of the remote area mail service throughout NT and WA.

In 2015, Cameron started Flight Standards with Ben

Aero Club of the Year

Winner: Royal Aero Club of NSW

The Royal Aero Club of New South Wales is committed to putting wings on dreams, offering aviation experiences that inspire and support everyone, including aspiring pilots, aviation enthusiasts and the wider public. Originally founded in November 1920, the club was re-established in 2023 by a passionate group with a vision to carry forward its legacy.

ABOVE: Lachlan Hyde, President of the Royal Aero Club of NSW

Today, as the Southern Hemisphere's largest volunteer-run and not-for-profit Part 141 Flight Training Organisation, the club's renewed mission is to shape the next generation of pilots, leaders, and aviators.

The Royal Aero Club's Flying Training Camps (FTC) are residential school holiday programs that provide teenagers with hands-on training and a structured pathway toward major aviation milestones, such as achieving their first solo flight. Held for the first time in January 2024, this camp brought together 34 student pilots, 15 volunteer instructors and 7 aircraft, collectively logging over 202 flight hours across 9 days.

Founded in 1920, the club was re-established in 2023 by a passionate group with a vision to carry forward its legacy

The camp celebrated significant achievements, with 3 students completing their first solo flights and 2 others reaching their first training area solos. Due to high demand, with over 80 young people submitting expressions of interest from across NSW, the club began early planning for the 2025 FTC securing additional resources, including more volunteer instructors, extra aircraft and expanded facilities.

The Royal Aero Club's "Try and Fly" weekends connect the community to aviation, offering people of all ages the opportunity to experience flight through Trial Introductory Flights (TIFs).

In 2024, the club ran two of these over the June and October long weekends and were able to spark a passion for aviation and give the participants the nudge to take their first steps toward flying. Activities during these weekends extended beyond just flying to include aerodrome walks, visits to the Camden control tower and a BBQ lunch, making it a fun and immersive experience for everyone.

Currently, the club has three aircraft available through partnerships with generous aircraft owners within the community who allow the use of their planes for flight training and private hire. In the coming months, it anticipates adding another Cessna 152 and a Piper PA28 Archer, which will further support the training needs of members. Additionally, during high-activity periods such as the Flying Training Camps and Try and Fly Weekends, the club collaborates with friends and industry partners who may not ordinarily be able to make their aircraft available year-round but are willing to support these events.

In February 2024, the Royal Aero Club also received its Part 141 Flight Training approvals, a big step that allows the club provide structured, high-quality training for the Recreational Pilot Licence (RPL), Private Pilot Licence (PPL), Commercial Pilot Licence (CPL) and Night Visual Flight Rules (NVFR) rating.

This certification shows the commitment to delivering safe, professional training that prepares members for the realities of aviation. The club has also submitted applications to CASA which, once approved, will allow the club to provide Flight Instructor Rating (FIR) training.

The addition of FIR training will allow the club to upskill existing volunteers as well as train the next generation of flight instructors. Additionally, the club is adding specialised training for flight activities like formation flying.

Mackney, as a result of a desire to provide vocationally-focused, practical flight training designed to prepare pilots for their entry into the aviation industry, something he believes was sorely lacking in GA. In 2018, Cameron added Kakadu Air to his portfolio, purchasing it in conjuction with three other investors. He is now the HOFO/HOTC of Kakadu Air, overseeing the fixed and rotary wing operations there.

Cameron focuses on providing first-job pilots with the opportunity to develop and grow, creating a fundamentally sound basis of skill and experience that will stand these pilots in good stead for their further careers, be it airlines or otherwise.

Now, many years later under Cameron's oversight, Flight Standards is the local training provider to 8WG. It provides cadet air experiences, pilot experience flights and "zero" to first solo training for nominated cadets.

"It is an honour to be recognised in this way," Cameron tells *Australian Flying*. "I am aware Col Pay's contributions to the GA sector and to be associated with his legacy is humbling. The citation of the award refers to a lifetime of service in GA and accordingly, the concept of service is something that I have not only tried to exemplify, but also instil into those pilots that I mentor as they "pass through" in the early stages of their flying careers. I acknowledge that I cannot do any of what I do without the support of the team that I have around me, they take care of many aspects of my personal and professional life that enable me to focus on making the contribution to the industry that I have. So, although this award means a great deal to me, it is also an acknowledgement of my team and I hope that it assists all of us in our efforts to inspire those who follow.

Flying Instructor of the Year

Winner: Jeremy Miller – UPRT Australia

JEREMY MILLER

Jeremy Miller founder and CEO of UPRT Australia

Jeremy fosters students' careers beyond just the training syllabus by immersing them in a comprehensive aviation experience that goes beyond standard flight instruction. His dedication to aviation is reflected in his establishment of the first in-depth Upset Prevention and Recovery Training (UPRT) program in the Southern Hemisphere, a pioneering initiative that significantly enhances pilot safety and skills.

Jeremy's passion for aviation, which began in childhood and was influenced by his family's aviation background, drives his commitment to providing exceptional training. He started flying at a young age, achieving significant milestones early in his career, such as his CPL and Instructor Rating by age 18.

His diverse experiences, from aerobatic flying to working with the Royal Flying Doctor Service, enrich his teaching approach. In his various roles, including Head of Operations, Chief Flying Instructor and Chief Pilot, Jeremy emphasises practical, hands-on learning.

He has logged over 10,000 flight hours, with 7,000 hours dedicated to instructing, and has experience with over 100 different aircraft types.

Jeremy's role as a CASA Flight Examiner and his approvals to teach and test advanced endorsements like aerobatic, spin and formation aerobatics further demonstrate his commitment to advancing pilot competencies.

By actively participating in airshows and competitions, he stays at the forefront of aviation techniques, continually bringing fresh, real-world experience back to his students.

Overall, Jeremy's approach to fostering a student's career is holistic, combining rigorous training, mentorship and real-world application, ensuring that his students are well prepared for the challenges and opportunities in aviation.

"I'm incredibly honoured to be named Flight Instructor of the Year," Jeremey told *Australian Flying*. "Teaching has never been just a job for me: it's a passion. There's nothing more rewarding than helping pilots develop their skills, push past their limits and achieve things they once thought was out of reach.

"For me, flight training isn't just about passing a flight test; it's about building real aviators; pilots who not only fly well, but fly safely and with confidence. Seeing my students grow into skilled, competent pilots is what keeps me motivated every day. This award is a great recognition, but the real reward is watching pilots reach their goals and knowing I played a small part in their journey."

> **By actively participating in airshows and competitions, he stays at the forefront of aviation techniques, continually bringing fresh, real-world experience back to his students.**

Young Achiever of the Year

Winner: Georgie Arnold

TOWNSVILLE HELICOPTERS

Georgie Arnold, Young Achiever of the Year

Georgie has dedicated herself to promoting aviation through her work as a brand ambassador. She develops and delivers extensive marketing and awareness campaigns with a professional and considered approach.

Georgie is sought after as a keynote speaker and industry representative to speak to the under representation of women in aviation, however, she ensures that she does not reverse discriminate and promotes an aviation-for-all approach.

Georgie has developed, launched and produced a podcast: *Aviatrix Airwaves*, written an activity book (for ages 4 – 9) *Hayley the Helicopter*, and undertook a 3 month tour of remote and regional QLD to visit schools to promote STEM in aviation. She regularly attends career fairs, trade shows and industry events as the company representative.

Georgie has presented to parliament through the ABC Trailblazers program speaking to the importance of aviation. In 2024 she was nominated as the RFDS local hero for the Townsville region and awarded the QLD Tourism Young Leader.

In 2023, she was a finalist in the Townsville Business Women's Corporate Business Women of the Year. She is currently participating in the inaugural Accelerating NQ Female Founders Program to further develop her leadership skills.

Georgie is often called on to represent young aviators and specifically women In aviation through local 'round-table' conversations with local and federal members of parliament. While she has focused on social media as an avenue to promote the industry, she is conscious of tone and integrity.

Georgie has already demonstrated her capacity to achieve success through her determination. She currently works for Townsville Helicopters as a charter pilot and social media manager, and is studying for her instructor rating.

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Flight Training Organisation of the Year

Winner: Panorama Airways

PanAir's Tammy and Charlie Camilleri

TAMMY CAMILLERI

Panorama Airway's (PanAir) success is rooted in a business plan that emphasises operational excellence, community involvement and innovative training solutions.

The organisation's unique strength lies in its personalised, inclusive training approach, commitment to developing aviation leaders and deep connection with regional aviation communities. With a strong, family-owned ethos, PanAir is committed to delivering more than just pilot training; it fosters the development of well-rounded aviation professionals.

What makes PanAir unique is its tailored training for individual growth. PanAir offers individualised training programs that cater to each student's specific career objectives and learning style. This personalised approach ensures that students are not only prepared to meet CASA requirements but are also encouraged to develop into skilled, confident pilots with a deep understanding of aviation's complexities.

Recognising the importance of emotional well-being in aviation safety, the school is currently integrating mental health awareness training into its programs

PanAir was one of the first flight training organisations to launch an e-Learning platform, allowing students to access briefing materials and theory content online. This innovation ensured that students could continue their education uninterrupted, with access to high-quality resources from anywhere in Australia. This platform is now a permanent part of PanAir's curriculum, offering not only CASA syllabus content, but also additional courses outside of regulatory requirements. This online flexibility sets PanAir apart as a leader in modern flight training.

Beyond the standard syllabus, PanAir offers a variety of additional courses designed to enhance student competency in areas critical to their future careers. These include human factors in aviation, advanced safety management, and mental health awareness training. By integrating these subjects, PanAir ensures its graduates are better prepared to navigate the complex challenges of the aviation industry.

PanAir goes beyond teaching technical skills by fostering decision-making and leadership abilities. Through the company charter and survey operations, students are exposed to real-world scenarios that require critical thinking and sound judgment, preparing them to handle unexpected challenges during flight operations, such as adverse weather conditions or in-flight emergencies.

PanAir places a strong focus on human factors and mental health in aviation. Recognising the importance of emotional well-being in aviation safety, the school is currently integrating mental health awareness training into its programs. This will equip students with strategies to manage stress and mental fatigue; key issues that have been under-addressed in traditional flight training. PanAir's foresight in these areas ensures that its pilots are not only technically proficient but also mentally resilient.

PanAir is a staunch advocate for gender diversity and inclusion in aviation. The school supports Women in Aviation International (WAI) Australia and contributes $5,000 annually to a flying scholarship to help women enter the industry. This effort is a testament to PanAir's belief that diversity strengthens the aviation community, and its initiatives have created real opportunities for under-represented groups.

"We are absolutely thrilled and deeply honoured that Panorama Airways Flight Training has been recognised as the Flight Training Organisation of the Year by CASA under the prestigious Wings Awards," says co-owner, Tammy Camilleri.

"This recognition is not just a moment of pride but a testament to the passion, dedication, and hard work that our entire team pours into everything we do. PanAir has been committed to delivering world class training, going beyond the bare minimum to ensure our students don't just meet standards, they excel.

"We've always believed that flight training is about more than just technical skills, it's about shaping resilient, confident, and well rounded aviators. Whether it's integrating mental health awareness into our training programs or pivoting to online learning during the pandemic, we've worked incredibly hard to adapt and innovate for the benefit of our students.

"This award is a reflection of the incredible efforts of our team and the trust of our students, who inspire us every single day with their amazing achievements. Watching them set goals, overcome challenges, and soar to new heights just motivates us to keep pushing the boundaries of what's possible in flight training.

"We also hope this recognition sparks more industry-wide conversations about the importance of incorporating mental health awareness and support into aviation training. It's not just an add on, it's essential to fostering a strong, healthy aviation community from the ground up.

"A heartfelt thank you to CASA and the Wings Awards for this incredible acknowledgment. And to our students, staff, this award belongs to you as much as it does to us. Here's to continuing to pay it forward and shaping the future of aviation. Thank you for being part of this journey with us!"

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Clouded Judgement

Even after decades of education and training, VFR pilots are still flying into instrument meteorological conditions. **Steve Hitchen** examines why this still happens and what pilots can do to improve their chances of a positive outcome.

There is solid truth in the old axiom that prevention is better than cure, but the world still has cures. That's because no matter how much prevention we employ, chaos still happens.

Take, for example, accidental VFR flight into IMC.

Despite all the training and CASA learning material, the ATSB's accident database is saturated with incidents where pilots flying visually have stumbled into meteorological conditions that they weren't prepared to negotiate.

In 2001, two authors in the USA named Wiegmann and Goh concluded that VFR into IMC perpetuates despite education because VFR pilots can't accurately assess what they are getting themselves into.

A quarter of a century down range and nothing much has changed. Prevention continues to fail in some cases, so is it time to work on a cure? Is it time to think about what action pilots should take once they have accidentally stumbled into poor or zero visibility?

CASA would say no. As a regulator, their position is that if you obey the rules then you won't enter cloud and therefore there's no need to take action; refer to the old axiom.

But the pilot who has made the mistake needs more than castigation if they are going to continue being a pilot ... they need something they can do!

Hows and whys

If you're the sort of VFR pilot who deliberately penetrates cloud, stop reading this feature now; there's nothing that can be done for you. The point is that most VFR pilots fly into cloud unintentionally.

UPRT Australia's Jeremy Miller has 23 years of experience

MAIN: It has been estimated that nearly all VFR pilots will inadvertently enter cloud at least once in their flying careers.

BELOW: The sky is doing a lot of talking, but do you know what it is saying.

teaching people about aeroplanes and how to drive them. He's done enough to understand how inadvertent VFR into IMC keeps happening.

"Quite often, pilots find themselves in cloud when they have lost situational awareness," Miller says. "To build situational awareness, they need good mental modeling. This is thinking five minutes ahead of the aircraft and planning what you want to occur, then comparing what you want to happen with what's actually happening

"It's poor decision making and situational awareness that causes VFR pilots to end up in IMC. They don't make a conscious decision to do it."

Whilst agreeing with Miller, Flight Standards Head of Operations, Cameron Marchant digs deeper into the causes.

"It's often said it's poor decision making with regard to weather, but there's more to it than that," he told *Australian Flying*. "It could be an unjustified belief in the pilot's own ability.

"At some level in every pilot they will overestimate their own abilities and think 'yeah, I can make it'. They don't think an entry into cloud will be as serious as it keep demonstrating itself to be.

"There's also confidence in what is becoming better and better equipment. A pilot might pause before entering cloud if they're flying an old Piper Cub with a magnetic compass, but nowadays pilots are learning in aircraft with G1000 avionics and all sorts of wonderful, very capable instrument systems.

"Pilots tend to believe that the equipment will get them out of trouble."

Echoing Wiegmann and Goh, Miller believes the problem stems from an inability to accurately assess the conditions.

"VFR pilots are not well prepared to read clouds and cloud movement, and that's probably a function of the training system," he says. "Inexperienced pilots become flying instructors, then teach the next generation of pilots.

"Quite often instructors haven't had the experience in dealing with cloud and weather themselves, so they can't pass that onto students."

The book says

To qualify as a VFR private pilot, you will need all of two hours instrument training. Mostly, that will consist of nothing with more integrity than dual flight under a plastic hood that allows you to cheat by using your peripheral vision. Simulator time on solid earth where vestibular vagaries that cause disorientation are absent is also permitted training.

And if you've ever actually flown on instruments alone you would know this level of preparation is akin to going to war having been taught only that rifles go "bang".

CASA, however, points out that PPLs are better armed than that, referring to the Non-Technical Skills (NTS) needed for a Part 61 licence. They include: NTS 1.2 on maintaining situational awareness and NTS 2.1 on recognising and managing threats.

CASA also leverages the Part 61 manual of standards and its navigation skills to support the argument that no more IFR training is needed. Those skills command a PPL to be proficient in selecting the routes and altitudes considering terrain, weather, NOTAMs, alternates and every other variable that plagues aviation.

Then there are the regulations that compel pilots to understand the meaning of visual flight rules and how not to infringe.

When it comes to a pilot taking action to save their lives, none of these rules really impress Cameron Marchant much.

"I believe we've got to give them 10 hours training," he reckons. "We've got to give them something. If we don't, we are probably being somewhat negligent. People will get themselves in this situation, absolutely. Whether it's deliberate through a sense of invulnerability or through misadventure; we're constantly seeing that."

Marchant finds an ally in Jeremy Miller.

"The two hours of IFR training that is in the PPL syllabus does more harm than good," Miller states firmly. "It gives pilots just

"Pilots will not rise to the occasion; all they do is sink to the level of their training"

MARK TYLINSKI

ABOVE: Simulator training is a good way to practice dealing with IMC from the safety of the ground.

LEFT: And once you're back in VMC, stay there!

enough knowledge to go and have a look in marginal conditions. I think we'd be better off putting 10 hours of training in the syllabus or get rid of it completely.

"We could just tell pilots not to go anywhere near cloud, don't push on, stay out of it all together. By removing that two hours of training it would influence pilots' decision making in and around cloud."

Investigations into accidents attributed to continued VFR into IMC inevitably focus on the pilot's actions, which is understandable; the pilot didn't get the weather, get-home-itis, didn't have a better plan. But the fact that it has been happening for decades and continues to plague general aviation hints that we might be missing something.

"One of the well-beaten drums is that accidental VFR into IMC is caused by pre-flight preparation," Marchant says. "Nowadays we have so much information available to us. It's not only the material that comes to us from Airservices like GAFs and TAFs, but it's all sorts of web-based applications like Windy, the BOM weather radar; all sorts of things that tell you about what's going to happen.

"There will always be the pilot who will look at the weather, think 'she'll be right' and jump in the aeroplane and go without actually checking the conditions.

'We're always going to say that the pilot flew into cloud because of poor pre-flight preparation, but I'm not sure the problem is that linear. A pilot can still do proper preparation, but with all the information are still unable to identify the hazard that is right there.

"Alternatively, they don't see it as significant as it might be. This is second-level situational awareness: they perceive it, but they can't quite comprehend it."

Startling effects

When a VFR pilot stumbles into cloud, they are up against the wall from the very beginning. They weren't ready, they didn't think it would happen, and a few moments ago everything was fat-dumb-and-happy. Consequently, the first thing that happens when the horizon disappears is the Startle Effect.

Miller's school, UPRT Australia, knows the Startle Effect well; it is equally critical in the first moments of flight upset as much as in VFR into IMC. It's the first realisation that you're in a spot that you weren't expecting, and the outcome is suddenly uncertain.

"There's nothing you can do to stop the startle effect occurring," Miller explains, "but, you can train a pilot to identify the startle effect, and then there are psychological and physiological tools to get back in the game.

"Startle activates the sympathetic nervous system, which releases adrenaline and cortisol, which causes the pilot to lose the ability to make conscious decisions. That's when you must overcome that and get your head back in the game.

"If you're the sort of person who gets quite relaxed in the cruise, finding yourself suddenly in cloud can ramp-up your mental activity and it can be difficult to make the transition to having to fly in cloud and everything that's associated with that."

So, at the moment when you need logic and reasoning the most, your brain has stuck its head in the sand.

"In those early seconds whilst you are suffering from startle effect, your logical cognitive processes are suppressed and you go through fight/flight/freeze reaction," Marchant adds.

"You are at very high risk of doing something inappropriate in those first few seconds, depending on how you react.

"It gets to the point where you have to make a decision. You can either A) continue in close proximity to terrain with poor visibility, or B) make a conscious decision to penetrate IMC in the interests of terrain separation.

"I know pilots who have

deliberately climbed into cloud because they got to the point where they'd inadvertently gone too far, and they needed to do the safest thing. If they're not trained or skilled enough, they're obviously at a great risk of loss of control."

Doing something

Having flown into cloud through mismanagement, misadventure or misdemeanour, VFR pilots too often blunder on, trying to find their way back to fat-dumb-and-happy. Mostly it's planless flying driven onward by sheer terror, the pilots having had the consequences explained to them many times over their flying careers.

Cameron Marchant: "What you need to do is something that keeps you alive! The action following the startle effect needs to be something that is easy to remember and easy to implement.

"Pilots will not rise to the occasion; all they do is sink to the level of their training."

This means those two hours of IFR plus a couple of flight reviews that comprise instrument training for VFR pilots; a pittance compared to what is about to be needed.

Both Miller and Marchant believe pilots can steer themselves towards a survivable outcome by doing something rather than nothing. But what is that something?

"I ask my students on tests, now that they've flown into cloud, what is their make-safe?," Marchant says. "It'll usually be something like roll wings level and climb. And if you're approaching high ground, it will then be a gentle turn away from the terrain.

"Rolling wings level is very important because it is turning that often triggers spatial disorientation, fly a collapsed scan, then climb and be aware of the lowest safe altitude for the area you're in.

"And don't be afraid to keep climbing, and if at any stage you break into VMC, you stay there! You can call ATC and squawk transponder codes; nobody cares about airways clearances in this sort of situation."

A collapsed scan means forgetting the clocks that you don't need right now and increasing your focus on two critical instruments.

RIGHT: We all want to fly, but sometimes discretion says the aeroplanes remained tied down.

If you're the sort of VFR pilot who deliberately penetrates cloud, stop reading this feature now; there's nothing that can be done for you.

"If you scan no instruments other than the attitude indicator and the directional indicator, you will maintain fundamental control of the aeroplane at the most basic level," Marchant explains. "If you know what a climb attitude is, say 10° nose-up, and you hold that with full power, you have a good idea of what the aeroplane is doing.

"AI for pitch and roll, DI for yaw. Keep those three things under control with an appropriate power setting and you'll keep fundamental control."

Jeremy Miller points out that one part of PPL/RPC training will provide life-saving guidance in this most critical of situations.

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MURRAY GERRATY

ABOVE: VFR pilots often enter cloud because they don't assess the conditions correctly. Is it safe to bypass this storm by going around to the right?

LEFT: VFR pilots need to take ownership of the problem and demand more IFR training from their instructors.

"The old 'aviate, navigate, communicate' still applies," he says. "Number One is to **aviate**: maintain control of the aircraft. If you have an autopilot, turn it on so you don't have to worry about flying the aircraft. Modern autopilots often have a little blue 'wings level' button: push that.

"The next step is to **navigate** the aircraft to a place that is safe. The answer to that will be determined by the specific situation. Do you do a 180° turn? Do you climb? If you're in amongst terrain, it may be safer to climb out of the cloud as opposed to turning around and flying into a hill.

"There's no right or wrong answer, it will depend on the situation.

"And when you've put the aircraft somewhere safe, **communicate**. Tell air traffic control and use whatever technology you've got to get the aircraft back in VMC again. Utilise the technology to keep yourself safe."

UPRT Australia uses what's called the Stored Decision Making Model to help pilots work out the best course of action. It goes like this:

1. Assess the situation? Be honest with yourself, what is going on around you?
2. Ask yourself how much time you have. Do you have to decide quickly, or do you have a bit of time?
3. Look at what options are available to you. Do you do a 180? Do you Climb? Do you turn into controlled airspace?
4. Look at the risks that are associated with each option. When we make a decision we often have to weigh the risks against the severity of what could happen.
5. Evaluate the risks verses reward
6. Make a decision.

"We're talking about applying this to complex decisions where cloud, airspace, fuel levels, last light are among the factors that need to be taken into account," Miller states.

"Pilots aren't taught to make those decisions. Too often instructors will tell students what to do rather than let the student make their own decision and then evaluate that decision and the consequences."

Prevention still rules

Even though pilots may be armed with actions to recover the situation, there's no denying the better strategy of staying safe to begin with. Whilst there is all the education delivered by CASA and flying schools, there is no doubt where the cause of VFR into IMC lies: with the pilots.

"VFR pilots should be taking ownership of this," Marchant says firmly. "Instrument flight is a perishable skill, but a lot of pilots don't do further training because they think they'll be OK, that they won't let it happen to them. That's hazardous thinking.

"They need to maintain an appropriate level of instrument skills. It is captured in flight reviews; there is a requirement, but that's only once every two years and most instructors will just pay it lip service."

"VFR pilots should be looking for further opportunities to train and further their skills," Miller agrees. "One of the problems of the current training program is that pilots come out thinking they know everything they need to know about being a private or recreational pilot. All they really know is the bare minimum needed to keep themselves safe.

"A lot of pilots will fly with an instructor only once every couple of years. I would encourage all pilots to go out at least once a year and do something that takes them beyond their comfort zone to learn something new."

Much of Marchant's instructing and check-and-training has been done in the maelstrom of Darwin's climate, where the weather takes but minutes to go from calm and soothing to malevolent and threatening. These conditions more than perhaps any other are conducive to luring VFR pilots into instrument conditions.

So, to he we reserve the final word.

"Don't think you're better than you are; don't push this stuff. It's not just a case of being unable to see, when you're in cloud it will bounce you around and the cloud will act to try to upset the aircraft.

"And if you've read this article and you think you have a method of pushing into IMC, don't."

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Looking back on 100 years and bold plans for the future

From printing to publishing, Yaffa Media has always been about its people and niche audiences. In 1969 it acquired *Australian Flying* and has been educating and inspiring the GA sector for over 56 years. Founded in 1925, it proudly celebrates a centenary of story telling.

David Yaffa Snr.

Founded on Friendship

Vision, strength of character and an irresistible personality enabled David Yaffa to become a key player in the media industry.

Yaffa Syndicate Pty Ltd was incorporated in 1925, but it had been five years in the making for the founder David Yaffa. Born in Sydney in 1893, David Yaffa Snr was the son of immigrants from Latvia. He attended Fort Street High School and went on to be a successful salesman for an importing company. This most likely gave him some entrepreneurial ideas about what he could import and sell in Australia.

He decided to specialise in products and services for the newspaper industry, which was the dominant advertising medium at the time – radio would not launch for a few years yet, and television was decades away.

In 1920, aged 27, he went to the USA where he secured the Australian agency for the Underwood Photo Service, and on his return set up a small office in Pitt Street. More travel and more agency deals followed, with Yaffa also representing other companies from America and Britain. Soon he was selling Australian rights to not just photographs but also news articles, feature writing, fiction and comics. He imported the first American comic strip into Australia and through his services Australian readers were introduced to leading feature writers from American and British publications.

Before long Yaffa Syndicate controlled Australasian distribution of features from world-famous services in the USA, UK, South Africa and Europe, and had offices in the US, UK and New Zealand.

His obituary in *Newspaper News* stated: “Olden generations would have sensed the secret of Mr Yaffa’s remarkable success in a fairy godmother’s gift at birth of the Golden Magnet of Friendship. Always – in Australia and New Zealand, in Britain and the Continent, Canada and the United States – he drew friends irresistibly, and was possessed of a genius for dissolving disputes and for acting as arbitrator.”

In tributes after his death in 1947 aged only 54, a common theme came through. He wore out a lot of shoe leather selling his services personally to the newspaper proprietors, and became well known for his great friendship, hospitality and negotiating skills. It was a remarkable achievement that from humble beginnings he soon became ‘one of the boys’ with the heavyweights of the Australian newspaper establishment. How did he do it? Through his forever friendly personality, business acumen and, according his grandson Max Yaffa, through “partying them to death”.

Sir Keith Murdoch, chairman of the *Herald & Weekly Times* and father of Rupert Murdoch, issued this tribute: “For 25 years I have known Dave Yaffa as a kindly, busy, progressive man, with plenty of pluck for adventurous business. He gave these years of service to the newspaper industry and wore himself out in the process.”

Another tribute came from Frank Packer of Consolidated Press: “Mr Yaffa was in all ways a man and a friend to be proud of. His ability and business acumen were recognised by all working newspaper executives of Australia, England and America. No-one had ever before occupied his unique position in Australian journalism and commanded the wide respect he did.”

David Yaffa was the negotiator for many important newspaper deals, including the sale of the *Daily Telegraph* from Associated Press to the Packer-controlled Consolidated Press in 1936. He had a very close relationship with Frank Packer – he helped Packer with the launch of the *Australian Women’s Weekly* in 1933.

International Connections

The first products to be sold by David Yaffa under licence in Australia were photographs. His continual knocking on the doors of newspaper offices began to pay off.

Before long, newspaper pages across the country were publishing photographs with the credit line YAFFA on them. Many were what we would today call stock images, particularly photographs used in advertisements, but as radio technology improved photos for news stories were sent by cable, the early equivalent of the fax machine. They were referred to as radio pictures, radio photographs or picturegrams. And with instant transmission they were in great demand for use alongside the latest news stories.

Some newspapers were slow to adapt to

the new technology and did not establish early connections with news services overseas. This left an opening for David Yaffa who on his early trips to America and Britain established links with overseas news services. Soon he was providing a news service to newspapers in Australia and New Zealand, syndicating news and feature articles as well as photographs. Syndicated news stories also carried the credit line YAFFA.

Yaffa Syndicate offices were established in New York, London and Wellington. The Yaffa Syndicate represented US firms Underwoods and McClure's, and the UK firms Newnes, Odhams and Punch, controlling Australasian distribution of feature stories from publishing companies in the USA, UK, South Africa and Europe. Through this syndication service Australian readers were introduced to the leading feature writers of publications such as *Life, Time, Fortune, The New Yorker* and *Punch*.

Comics, too, were big business. Yaffa imported the first American comic strip into Australia, *The Clancy Kids* by Percy Crosby, and went on to syndicate a multitude of famous comic strips including *Popeye, Blondie, Mandrake, Speed Gordon, Mickey Mouse, Donald Duck, Dick Tracy, Superman, Dagwood, Orphan Annie* and *Henry The Little King*. Fortunately, with some persuasion from David Yaffa no doubt, newspaper publishers everywhere recognised that the comic strip was an essential ingredient for readers who became strong followers of their favourite comic characters. Hearst-owned King Features Inc of New York was one of Yaffa's largest suppliers with comics in nearly every newspaper in Australasia.

Newspaper News

In 1928 David Yaffa launched *Newspaper News*, a monthly trade publication that enabled him to stay even closer to his newspaper friends and clients. It was only the second publication in the world of its kind (the first was in Canada, called *Marketing*). It was also great timing – newspapers reached their peak in Australia in the 1920s with 23 metropolitan dailies in print in 1926; today there are ten.

Making use of its international connections, *Newspaper News* published the latest developments in advertising, radio, newspapers and newsprint, sourced out of the cable news services in his New York and London offices. This kept Australasian newspaper, advertising and marketing executives up to date with international trends and developments in their industries.

In addition to overseas news about media and marketing, *Newspaper News* published quirky side stories such as one about a journalist who was knocked over by a bus and wrote his own obituary as he lay dying on the footpath. Talk about gutter journalism!

Locally it covered news and features about Australasian media, advertisers, advertising agencies and printing technology. Companies operating in these sectors found that not only was the content useful for their own businesses but also for their clients. It followed that if advertisers such as Colgate-Palmolive and Reckitt & Colman were reading it, then advertising agencies and the media would want to advertise in it to attract business from them. The media would also advertise in it to attract business from advertising agencies, and suppliers would advertise for business from anyone.

In the heart of the CBD

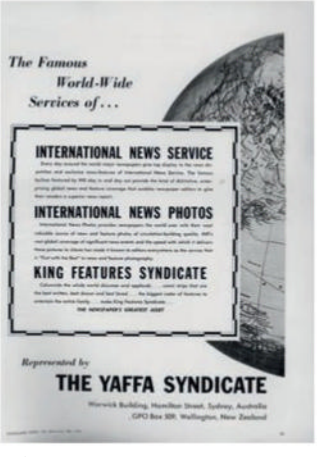
With business booming for both *Newspaper News* and the Yaffa Syndicate, larger and more appropriate premises were needed. In 1934 the company moved into new offices on the top floor of the Warwick Building at 13-17 Hamilton Street in the middle of Sydney's CBD. Also in this building were the editorial and production departments of *The Sydney Mail*, a weekly magazine published by the *Sydney Morning Herald*, while in the next door building on Hunter Street were the offices of the *Sydney Morning Herald* – talk about getting close to your clients!

David Yaffa continued his overseas travels in the 1930s to cement relationships with clients in the US and UK, but with the onset of war he had his own battles to fight. In March 1940 the Australian Journalists' Association lodged a complaint with the Federal Government about "the great harm inflicted upon Australian industry by the importation from overseas of cheap syndicated press material". The main argument was that local artists and authors were being deprived of work, and that the syndication of overseas material was "a menace to the cultural and industrial standards of Australia created by the practice by which wealthy newspaper proprietors in this country are importing syndicated copy and drawings." The government duly banned the importation of comic strips and other artwork for printing newspaper supplements that had been created overseas.

This naturally galvanised David Yaffa into action. Apart from the comic strips he was deriving good business from selling newspaper supplements. In a letter to the Minister for Customs he explained how in July 1939 he had been commissioned by Consolidated Press "to go to America to prepare and purchase ready printed colour comics. On their behalf I made a contract with the Acme Colorprint Coy and the first shipment left America three days after my arrival and landed in Sydney about the time war broke out."

He marshalled his newspaper proprietor friends to lobby the government and a flurry of letters and telegrams from the publishers followed. He wrote regularly to the Minister for Customs and other Ministers. Frank Packer wrote to the Trade and Customs Minister pointing out inconsistencies in their rulings affecting Consolidated Press. Not all newspaper publishers, however, were prepared to join the argument, saying that all their energies would be devoted to the war effort.

Despite all the lobbying the ban continued – there was a war on, after all – but it was still in place when David Yaffa died in 1947. Lobbying can be an exhausting process, perhaps it contributed to his early death.



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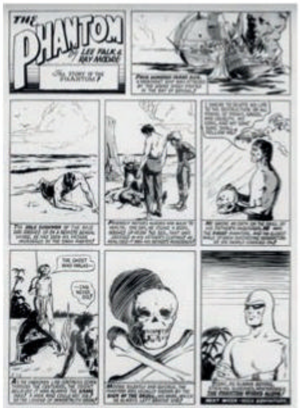
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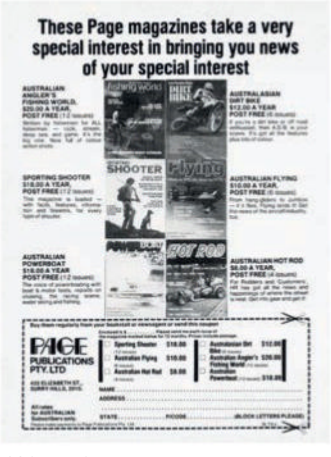

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Left to right: newspaper article with Yaffa credit line; *Phantom* comic circa 1930s; ad from *Newspaper News*.

A Player In Print

In 1940 David Yaffa bought a newspaper press from the *Sydney Morning Herald* and converted it to four colour printing. This was the start of the company's commercial printing operations.

Prior to 1940, *Newspaper News* would have been printed by outside printers, possibly by the *Herald* on the same press purchased by Yaffa. The newly-acquired press, a newspaper rotary letterpress machine, was installed in the basement of the Warwick Building along with binding and stereotype departments, a loading dock and a crane. With an emphasis now on printing, a new company, The Rotary Colorprint Pty Ltd, was set up.

Among the first publications printed by Rotary under licence were the Pacific editions of *Reader's Digest*, *Time* magazine and the first *Phantom* comics. The *ABC Weekly* magazine and the *Australian Army* newspaper were amongst the earliest local titles printed.

To complement the newspaper printing operation a second printing facility was set up at Crane Place, a small laneway between George and Pitt Streets at Circular Quay. That building contained a number of shops and other commercial businesses, and like the Warwick Building the printing operation was in the basement. This included sheet-fed presses, later to be upgraded in 1958 to three Heidelberg Cylinder Letterpress machines, still considered to be the best letterpress press ever made, plus Heidelberg Platen and Vertical Mehile equipment. The compositors department had four linotype (hot metal typesetting) machines. Altogether there were about 30 staff at Crane Place including machinists, compositors and proof readers.

In its 65-year history there were only three managers at Rotary Colorprint. The first, Bob Ritchie, died on the job in 1966. The second, Neville Bunce Snr, held the position until 1982 when his son Neville Bunce Jnr took over.

The young Bunce started at the company as an apprentice in February 1963. "Prior to doing apprenticeships at the printers," he recalls, "all apprentices were required to do three months of office work as delivery messengers at the Yaffa Syndicate offices in the Warwick Building on Hamilton Street. The first three months of my working life were spent delivering parcels, advertising copy, metal printing blocks and newspapers all around the city, plus daily trips to Martin Place to collect the company's mail from GPO Box 606. We walked everywhere, no public transport for us. I was fifteen and a half years old and got to know all the streets and important city landmarks.

"I started my five-year apprenticeship as a letterpress printer at Crane Place in May 1963 but later that year we were told that the Warwick Building was going to be sold. A new building was to be built on the site... Sydney's Australia Square." (In all, a total of 30 buildings would be demolished for this iconic Harry Seidler-designed building that became Sydney's tallest skyscraper at 50 storeys).

Moving to Surry Hills

The company had been given notice to quit the Warwick Building in May 1962, but finding suitable new premises for the presses proved to be a major problem, causing extensive delays. Finally a building was found in Surry Hills near Central Station at Butt Street. (Butt Street is a dark, narrow lane that was known colloquially as Blood Alley because warring gangs of young men used to dump the bodies of their enemies there).

David Yaffa Jnr (DY) in New Guinea.

"The Butt Street building was three storeys, previously a cosmetics factory, large enough for both printing operations including the 55-60 printing staff and all the office staff. The newspaper press and large equipment from the basement in the Warwick Building could be accommodated on the ground floor, while the Crane Place staff and their letterpress machines could be accommodated on the first floor. The office staff were on the top floor. That was the plan," says Bunce. "not everyone was happy... Surry Hills was so far away!

"I was the first employee to walk into Butt Street – being the youngest staff member it was my job the clean up the new building. The Rotary truck driver would drop me at the door in the morning and come back in the afternoon to pick me up. I spent a few days by myself sweeping the dusty floors and doing a general clean-up.

"What I didn't know at the time was that I would be doing the same job 42 years later when the company vacated the building... sweeping the floors and cleaning up everything. I was the last person to leave the building, as well as the first to enter it!" (Young Neville is also the only person alive today to have worked at the Warwick Building, Crane Place and Butt Street).

Rotary Colorprint was a mid-size commercial printing operation from the 1960s through to the 1980s. It employed around 55 staff working 8-hour day and afternoon shifts. Over the years more than 30 apprentices did their five-year trade course there, with three apprentices achieving Apprentice of the Year status. Apprentices and truck drivers were usually sourced by Neville Bunce Snr at his local pub in Leichhardt.

In the early 1950s Rotary printed the comic sections for the weekend newspapers plus stand-alone King Features comics including *Blondie, Dagwood, Archie, Phantom Ranger, Lois, The Shadow, The Invisible Man, Flash Gordon, Beetle Bailey, Mandrake, Jungle Jim, Felix the Cat, Denis the Menace* and so on, and Cleveland Westerns. These were followed in the '60s and later by booklets of crosswords, puzzles and horoscopes and a succession of 'pulp fiction' products – detective stories, action stories, 'true confessions' and a host of titillating and risque titles such as *Daring Men's Stories, Adventure For Men, Modern Men* and *Real Experiences*. Different times – the presses had to be kept busy somehow!

By the turn of the century printing technology was marching on and plate-less printing was the way of the future. On top of this, much of the machinery at Rotary Colorprint was reaching the end of its life. Eventually there was a clear choice – upgrade most of equipment at great cost or get out of the printing business. Pragmatism won the day and the company closed operations in August 2005.

A Diversion to New Guinea

David Yaffa died in 1947 and was survived by his wife Doris, daughter Denise and son David Jnr, who was only 13. Stanley Eskell, husband of Denise Yaffa, became managing director of the company.

Stanley Eskell had been in the army during the war and had served in New Guinea, an experience he would soon put to advantage. In 1950 the company launched *The South Pacific Post*, based in Port Moresby, to be followed later by a group of other local newspapers that included *The New Guinea Courier*, *The Rabaul Times*, *The New Guinea Times* and *Nu Gini Toktok*.

In addition to printing and publishing its newspapers in New Guinea the company was busy distributing the comics that it printed in Australia as well as representing the American publications *Time* and *Life International* in the region. It also distributed *The Bulletin* and *Australian Women's Weekly* magazines and the *Daily* and *Sunday Telegraph* newspapers for Consolidated Press. Its letterhead proudly described the company as "Commercial printers and publishers of the first air-delivered newspaper in the Pacific".

David Yaffa Jnr (referred to as DY from here onwards) joined the company at the earliest opportunity aged 22 and became a director in 1959, aged 25. In 1961 Stanley Eskell resigned from the board and DY took over as managing director.

The following year discussions were held about the possible expansion of the company to include more offices and additional commercial printing operations in New Guinea. There was also comment made that the papers needed stronger editorial direction bearing in mind the changing political environment. A number of interested parties expressed their interest in purchasing a stake in the company to address such criticism. This led ultimately to the sale of a controlling interest in the New Guinea operation to the Melbourne-based *Herald & Weekly Times* Group.

Essentially Yaffa Syndicate ended its New Guinea business in 1965.

Building a Stable

For more than 30 years the company owned just one publication, *Newspaper News*. That all changed in the 1960s as David Yaffa Jnr (DY) assembled a stable of business and consumer magazines.

The company's presses were busy enough printing pulp products, but no doubt there was a limit to how many booklets of puzzles, crosswords, detective stories, true confessions and titillating tales the market could stand. Alternatively, magazines could produce a healthy income from advertising and subscriptions, particularly if they could corner a market or dominate a category.

Launching a magazine cold turkey is a lengthy and expensive process. If it fails, the financial loss can be high and irretrievable. DY's preferred method was to buy publications that were struggling or in a fire sale, and breathe life into them. By keeping a heavy lid on costs he could run them more economically than under their previous owners and, as the stable of titles grew, economies of scale could kick in.

In the 1960s he purchased eight magazines and launched none; in the 1970s he purchased eight more magazines and launched one. Right from the start the magazines were a mixture of business titles (trade magazines) and special interest titles (consumer magazines). This mix is unique – no other publishing company in Australia covers both categories, they are either publishers of business magazines or publishers of consumer magazines. This is still the case.

Three of the magazines acquired in the 1960s are still published: the business magazine *Packaging News* and the consumer magazines *Australian Flying* and *Sporting Shooter*. The one magazine launched in the 1970s, *Guns Australia*, survived in a fashion, being merged with *Sporting Shooter*. The other seven are no longer published.

Magazine publishing is an ever-changing business. Successful titles are invested in and improved. Spin-off products such as guides and directories may be created to capitalise on the momentum of the parent title and an effective subscriber list. Unsuccessful titles are quietly buried, but only after every effort has been made to keep them alive. These efforts might include changing the frequency, the paper stock, the page size, the number of pages, the binding, the print run, the distribution or the staffing.

DY was a master at tweaking these variables, but in the end it always came down to the bottom line. No room for sentiment. Of the 56 titles published by the company since 1960 only 16 survive in print. The stable reached its zenith in 2003 with 37 magazines.

Tracy Yaffa and David Yaffa.

Over the years with its business titles the Yaffa Group published the market leader or significant magazine in more than 20 industries including packaging, food manufacturing, advertising, shooting, photography, air conditioning, panel-beating, boating/sailing, fishing, dance, aviation, textiles/fashion, defence, sports goods, stationery, hospital management and club management. With special interest magazines it published leading titles about flying, fishing, cycling, photography, shooting, dance, sailing, walking, health, woodworking, skiing and scuba diving.

The Empire Builder

David Yaffa Jnr (DY)'s career with the company spanned 57 years from 1955 to 2012. As proprietor he built the company into arguably the largest independent specialist publishing group in Australia.

DY's father would not recognise the company as it is today. The syndication business, the backbone of the company before the war, no longer operates. The printing company, the major contributor to the company's coffers in the generation after the war, no longer operates. The world changed, and the company had to change with it.

During his time with the company DY presided over the expansion of its printing operations, initiated its major move into magazine publishing, assembled a stable of more than 30 magazines. He also closed down the printing company – there was no room for sentimentality.

"David Yaffa was a proprietor with a true feel for the media," stated *AdNews* in its obituary in 2018. "He was in it for the long haul. He spent a lifetime building up the business his way, through trial and error, virtually single-handed. His greatest business achievement was the development of his father's business into a significant force in Australian publishing. Few companies in Australia remain in private hands after nearly a century.

"While he was single-minded and demanding, he was not the stereotypical, ruthless media proprietor. He was polite and fair and would treat his staff with respect if they did their jobs well. For those on the editorial side it was gratifying that the content of the magazine came first. In theory a good product attracted readers, and good readership numbers attracted advertisers. More revenue could then be allocated to improving the product further. Consequently he backed his good editors and let them get on with the job without interference."

At work he remained behind the closed door of his office every day from 8.45 to 6, preferring to speak with his lieutenants by phone. There were occasional meetings in his office limited by the number of chairs for visitors (three). In later years budget meetings were held in the boardroom with senior staff of the different magazine groups, but company-wide management meetings never happened.

Most of his employees would only see him fleetingly. He was not the type of boss to wander around the building, let alone have discussions away from his office. The company Christmas party was an exception, when he was happy to chat with his staff. In some years there were rumours that he would make an announcement about the company to his staff, but that never happened either.

He retired in good health in 2012, possibly with some reluctance about handing over the company he had built to the next generation. He enjoyed six years of retirement and after his death in 2018 the company's staff were invited to join

NEWSPAPER NEWS
A Prosperous New Year To All
Advertising News
Auntie's big chance!
AdNews
AdNews 90 YEARS
Alexa, tell me about Amazon.

The evolution of *Newspaper News* to *Advertising News* then *AdNews*.

the family at the Royal Sydney Yacht Squadron in Kirribilli to celebrate his life.

All four of DY's children have worked in the company at one time or another. Tracy is managing director, Max was a sales manager on business magazines for many years, Guy worked briefly in the marine group of magazines in the 1990s, and James was publisher of *AdNews* before his current role of establishing the bicycling classics events. Tracy's daughter Lucy is the company's marketing and events manager. The company is now owned by Tracy and James.

The Flagship

The oldest publication in the Yaffa stable is *AdNews*, the flagship of the company, which will be 100 years old in three years' time. It started life as *Newspaper News* and went through quite a few name changes.

Newspaper News launched as a monthly tabloid size newspaper in 1928, and despite its name was never just about newspapers. Advertising is the lifeblood of media, and David Yaffa recognised this right from the start. There were two publications about advertising already circulating – *Advertising in Australia* and *The Advertiser's Monthly* – that would have been seen as competitors. So he bought them out and merged them into *Newspaper News* within a year.

Newspaper News reported on all forms of media, not just newspapers, although newspapers were the dominant advertising medium until well after the war. Coverage concentrated more on the business side of publishing – advertising, circulation and production technology – and less on the journalism side. Commercial radio and outdoor advertising (posters and billboards) received token coverage in the early days.

Commercial radio gathered pace in the 1950s and television launched in 1956, leading to the launch of a spin-off publication called *Radio Television News* in 1957. At the same time the frequency of *Newspaper News* was increased from monthly to fortnightly and it became a magazine rather than a newspaper. *Radio Television News*, however, faced strong competition, was unable to exist on its own, and was incorporated into *Newspaper News* in 1961.

The impact of television was enormous. The production values of commercials became more and more important, leading to a rapid expansion of the advertising industry with its expertise in the creation of advertisements and media planning and buying. International ad agency networks, mostly from the US, spread across the world. Advertising agencies became indispensable players, in many ways controlling the relationship between their clients (advertisers/marketers) and the media. The appearance of specialised media buying agencies in the 1970s strengthened their position further.

This ascendance of the advertising industry led to the publication being renamed *Advertising & Newspaper News* in 1969, with a further change to *Advertising News* in 1971. This was shortened to *AdNews* in 1984 as part of a redesign.

The 1980s and the rest of the century were hectic times for the media. Until Treasurer Paul Keating stopped it, the fringe benefits tax allowed entertainment as a tax-deductable expense. Enormous amounts of alcohol and food were devoured in the interests of doing business. Long hours at the pub, lunches that never ended and exotic junkets were par for the course. For many organisations, including *AdNews*, the primary aim was to finish the week's work by lunchtime Friday so that you didn't need to go back to the office from the restaurant or pub.

In 1980 *AdNews* interviewed Don Morris, managing director of the ad agency Mojo, which was winning every pitch it contested at the time. "We work bloody hard here," he said on the record. "We start around 7am so that we can finish the day's work by lunchtime. That way we can enjoy lunch and not go back to the office. We do that every day of the week."

Agency Christmas parties were legendary. Certain agencies became known for their spectacular parties and made enormous efforts to ensure each one was better than the last. Mike Magnus of Magnus Nankervis & Curl owned a rural property southwest of Sydney alongside a disused railway line. Somehow he persuaded NSW Railways to open up the line and provide a train service for his guests to ride from Central Station to the end of his property's driveway where a temporary platform was constructed.

Guests at agency Christmas parties were typically staff, clients and friends in the media. For one Christmas party at MDA Sydney an above ground pool was installed in the agency and before long guests were stripping off and hopping completely naked into the pool... if they could find space... staff and guests, male and female, all piled in.

Things calmed down somewhat after the recession of 1990. Nevertheless, the advertising industry still had plenty of character – it was, after all, supposed to be the leader in creativity – but the boozy culture eased up as agencies gradually became more corporate.

Transition to Media

In 2015 the Yaffa Publishing Group was rebranded as Yaffa Media. The transition from printed magazines to a media and marketing company with multiple touch points was a complicated and at times painful journey.

The arrival of digital technology in the 1990s hit the media industry like a sledgehammer. Disruption was rampant. Print-based companies

Cycling Classics founder, James Yaffa in lycra.

such as newspaper and magazine publishers were in many ways hamstrung by their past as they tried to hold onto their print revenues. Like most publishing companies Yaffa was a laggard in embracing the new technology, a situation that opened the door temporarily to start-ups and digital natives that had no legacy to protect. Consultants were employed to build systems and websites in the early days, often with very little success. Finally, by the end of the century, the company started to establish workable websites and newsletters and get up to speed with the changing technology.

Managing director Tracy Yaffa looked back at how it was during the transition: "When we first did digital the editor had to be across it, of course, but there was this other department that did all the uploading and other digital things, and there were even dedicated sales people just for digital. People became focused almost on keeping them separate. There was print and there was digital, whereas now it's just what it is, it's just publishing."

The rebranding of the company was announced at a staff function in 2015. "We are no longer magazine publishers," said Tracy. "We are creators of engaging media. Our inspired content is consumed on different platforms. We are experts in our diverse fields and a trusted and valued source in this new world. Our magazines are now brands across print, digital, apps, conferences and social media. We must continue to strive to achieve or maintain market leadership in each of our targeted segments."

Most importantly, the rebranding required a change of approach among the staff – they needed to embrace the future, and were advised that they could either get on board the 'Yaffa bus' or choose another bus. "It was a matter of getting wholesale change from the people," said Tracy. "They had to think differently, think about what the needs of the company were, and what the aims of the publications were. A few jumped off the bus because they simply couldn't adjust to changing needs, but by and large it was really impressive about how excited everyone got about it. It's been amazing seeing what people can turn their attention to once they get it."

One of the company's earlier diversifications was the move into events. Since the 1990s the company had been commissioning Two de Force, an events company, to organise the *AdNews* Agency of the Year Awards, an annual industry awards dinner. The relationship worked, and when Two de Force was offered for sale to Yaffa in 2007 the deal was done. Awards and other events for Yaffa magazines could then be handled in-house by Two de Force. Additionally, Two de Force could expand its operations independently by organising events for non-Yaffa clients. Events provided multiple revenue opportunities – sponsorships, entry fees for awards and competitions, and tickets to attend.

Celebrating 100 years with an eye on the future: James Yaffa, Tracy Yaffa and Lucy Yaffa.

While events can be a key part of the mix, there are many other ways the company has developed to help clients achieve their marketing aims. The list now includes conferences, exhibitions, product launches, competitions, awards, podcasts, videos, roundtables, moderating and hosting. Magazines that can be extended into these areas are the ones that have survived; magazines that have not been able to offer such additional marketing opportunities are unlikely to survive. As Tracy explains: "We used to mark our success by the economies of scale – the more titles the better – although the 80/20 rule applied with 80% of the profit coming from 20% of the titles. But then the internet and social media arrived and we found the long tail of the less profitable titles was dragging us down. So our strategy became one of going deep into the industries we served – in each industry we aim to be number one, be relevant and reimagine what we can produce for them. Now there's a suite of things we can do very easily, whether it's a conference, a breakfast, an awards program, an online entry campaign or a white paper. We can do all these things and offer them up for each industry."

This has required a long list of additional skills from the editorial and production staff. The editors continue to co-ordinate content – just as they did in the old days of printed magazines – but now they need to get out of the office, be comfortable on the stage at conferences and events, create podcasts and videos, and generally be the face of the publication as well as coordinate editorial support. Now they are professional communicators, conference agenda leaders and keynote speakers, and the presence of the editor driving the content package sweetens the deal. 'Church and state', the traditional divide between editorial and advertising, is a thing of the past.

The Next Generation

Lucy Yaffa, marketing and events manager of Yaffa Media and a fourth generation member of the family, takes a look into an unknown future.

It's near impossible to predict what impact changes in technology will have on the business – from AI to The Metaverse – innovation in technology will continue to transform how Yaffa Media's content is created, distributed and consumed.

As we look into the future, one constant at the core of our business is the people and their communities. From photography to packaging we will continue to connect with and serve the needs of each community. The nature of these connections will inevitably change as we explore new platforms and ways to connect.

Working for a medium-sized family business is quite a different experience compared to the global multinational companies I have worked for in the past. While we may not have the same access to resources as larger companies, our agility puts us in a strong position to navigate the future. We can implement changes quickly without the need for lengthy approval processes. In addition, we are open to taking risks and exploring new ideas for connecting with our communities.

I'm incredibly proud being the fourth generation in a business which has successfully adapted and evolved over the past 100 years. I'm excited about the opportunities and challenges that lie ahead for Yaffa Media. ●

By Jeremy Light

Jeremy worked at *AdNews* from 1978–2015.

Levelling Up

Given the chance, pilots will fly something bigger, faster, with more engines. **Paul Southwick** walks us through his big twin rating.

It can be a long road, from basic trainer, via complex four-seaters, an IFR rating, commercial licence and even a small twin. To fly charter, head for the airlines, or work as a corporate pilot, aviators will likely need to get signed off in a large twin engine aircraft. For example, a King Air, Cessna 402, Islander or similar.

As part of my role testing, selling and ferrying aircraft for Tecnam and other manufacturers, I was offered a "rating" in the Tecnam P2012 Traveller: an eleven seat, twin engine, high wing, fixed gear, FADEC, and Garmin G1000 NXi equipped, modern offering.

The Traveller doesn't require a specific rating if you already have a twin endorsement, but for insurance purposes, and so an owner will let you fly it as pilot in command, you will need to either do the factory course in Italy, or train with an approved organisation, like Avia Aviation, a flight school that also operates the Traveller on charter.

Holding a rating for a similar sized aircraft, the single turbine-powered Cessna Caravan, I thought it would be interesting to see how the two compared, as there is much turbine vs piston debate.

Hit the books

They don't let you command a big twin lightly. It's not all about you, rather the many people who trust you with their lives to get them to their destination safely, flying what CASA defines as a "large aircraft." That is, an aeroplane that has either a seating capacity of more than nine seats, or a maximum take-off weight (MTOW) of more than 8,618 kg.

Twins are great performers when both engines are working, but when one fails, you must be on top of the immediate and following actions, to save the day.

Although the Traveller can be operated under Part 91 as a private operation, it is more likely to be a charter or commuter aircraft under Part 135, or Part 121. For the last two, you will need a CPL or ATPL, and most likely a command instrument rating.

Avia instructor, Apollon Maglogiannis, sent me reading in advance. This included a comprehensive ground briefing on major aspects of the Traveller, a copy of the pilot operating handbook, engine notes, practical operating guidelines, an aircraft profile with weight and balance for AvPlan (or another EFB), an excel spreadsheet to calculate take-off and landing distances under varying conditions and loads, a quick reference check list and the standard CASA twin rating questionnaire. The latter requires research and consulting the POH to find answers, including the use of the take-off and landing tables. It was necessary to run multiple weight and balance profiles for flights through AvPlan to become familiar with standard loads and fuel reserves under different scenarios, for example where there is weather, or traffic holds required.

Key specifications

The Traveller has a wingspan of 14 m, length of 11.9 m and height of 4.2 m. Empty weight is 2,487 kg and MTOW 3,680 kg. The injected, six-cylinder, turbocharged, and FADEC controlled, 375 hp Lycoming engines, drive 2.1 m variable pitch MT-Propellers. They are fed AVGAS from a tank in each wing, that each carry 364 litres of useable fuel. Baggage maximum is 103 kg in the front compartment, and 239 kg in the rear compartment.

With FADEC engines, the Traveller does not have any mixture controls, and if you are used to the G1000 kit, it is an easy adjustment to the three-screen layout. Also nice is the overhead panel with fuel and lighting switches. With that overhead panel you know you're flying a big aeroplane.

Other nice features from a pilot viewpoint, beside the powerful air conditioning, are the wide passenger and freight doors at the back and separate doors up front for both the pilot and either co-pilot or passenger. No need to clamber past passengers, down a narrow isle in the Traveller. The pilot seats are high up, include arm rests for cruise, and grant a commanding view like the Caravan.

Pre-flight in the Traveller is standard stuff, the only big point of note is that you require a tall ladder to check the fuel and oil. One advantage of those high up wings and engines (unlike a turbine single) is that the propellers are unlikely to incur foreign object damage. There is also a tail stand, yet another sign you are flying a large aircraft.

Ground course

The one-day ground course component was conducted by Maglogiannis. The other student used to fly King Airs for the Royal Flying Doctors some years ago, and a Beechcraft Barron. He had a strong engineering background, which made the question-and-answer sessions interesting.

Charles Gunter, owner of Avia (a former 747 check captain with Cathay Pacific), who flies the Traveller on charter, made a few important points. First, because of the large rudder on the Traveller, and its long arm from the centre of gravity, it is particularly effective. This means in a stall recovery, yes, the rudder needs to be applied, but you must be careful not to put in too much. Secondly, he emphasised the importance, unlike a typical private flight in a GA aircraft, of not automatically filling the tanks if that would unnecessarily put the aircraft close to or over MTOW. The reason is that in the event of an engine failure on take-off, the heavier the aircraft, the worse the single engine performance, and the importance of quickly identifying, confirming and feathering the propeller on the (correct) dead engine. Thirdly, flapless take-offs are best when the runway length exceeds 1,200 m, as this means there is one less thing to manage in the event of an engine failure.

The ground course included a one hour walk-around of VH-VNV, getting familiar with aspects of the aircraft and conducting a full pre-flight using the POH. Nice that with only one fuel tank per wing, that there are just two drains per side (one engine and one wing).

TRAVELLER
N212PL
I-EASD
P2012

Commuter airliners class

PAUL SOUTHWICK

Because of where it is operated, VH-VNV was equipped with the optional flight into known icing (FIKI). A lot of time was spent learning how the system should be operated in different conditions, and in different modes.

Critical for the Traveller is to make sure that the rear tail stand is in, and not removed until the last second. It must also be in before passengers disembark. Speaking of passengers, a full safety brief is required, including the location of the four emergency exits, and loading one at a time. New for pilots of smaller twins will be the "Fasten Seat Belts" illuminated sign controlled from the cockpit and part of the checklist.

Hit the numbers

After the ground course comes the flying. For pilots with twin and instrument ratings, as well as competency with the Garmin G1000, this will involve about six hours flying. There is a VFR flight covering handling and emergency procedures, followed by an IFR flight with instrument approaches and more simulated emergencies. Depending on performance in the first two, there may be a consolidation flight or two. It's based on how well you perform. Fortuitous for me was that the flights were out of my home airport of Essendon, which lightened the workload. Also, lots of experience flying the G1000 NXi equipped, smaller Tecnam sibling, the P2006T, where many of the controls and switches are in the same spot, and similar handling , helped a lot.

My first flight was to be VFR on a reasonably low cloud, cold day, from Essendon to another familiar airport, Wangaratta (YWGT) and back. There would be air work on the way and at Wangaratta.

Twins are great performers when both engines are working, but when one fails, you must be on top of the immediate and following actions, to save the day.

Once strapped in we started up and I taxied out, soon realising we were in a much heavier aircraft. Just getting off the line takes a lot more power than you are used to. Maglogiannis demonstrate the tip of quickly bringing the blue pitch levels back to near feather to get the aircraft off the line.

With the FADEC engines you don't normally need to go to the run-up bay as the checks are done automatically, at the push of two buttons, on taxi, with rpm over 1,200. The system will indicate either an all clear; ok to fly with caution but fix within 20 flying hours (amber), or not authorised to fly (red).

After a threats and safety take-off brief, I lined up on runway 17 and applied full power. Some, but not a lot, of right rudder was required, as was some aileron into wind, and I rotated at the no-flaps speed of 92 knots, which is also the blue line. After runway gone and a good positive rate of climb, I engaged the yaw damper, commenced the ATC instructed turn towards Doncaster Shopping Centre, and reduced propeller rpm to 2300. We were soon levelled off, at 65% power and 2,200 rpm, with a TAS of approximately 148kts, squawking 1200 and broadcasting on 135.7 to advise the Melbourne Inland Traffic that

TECNAM
TRAVELLER
I-PDVD

we were heading north for Kilmore.

In training, the Traveller tends to burn fuel unevenly, especially in the take-off and climb, so the instructor had me practice cross-feeding fuel from one tank to the other, setting a timer so as not to forget to switch back.

Before Kilmore we used the autopilot to head directly to Wangaratta. However, a lot of low clouds got in the way, so we tracked further north and climbed. Maglogiannis then had me perform multiple steep turns; stalls, both basic and approach; and practice climbing and descending, with the required power and rpm changes.

In the stall the Traveller was docile with only a slight release of back pressure and a little opposite rudder required to break the stall and level the wings. An important lesson here was that the power needs to be applied smoothy, but not too slowly, as there is 375 hp per side to reduce the altitude lost by such a heavy aircraft.

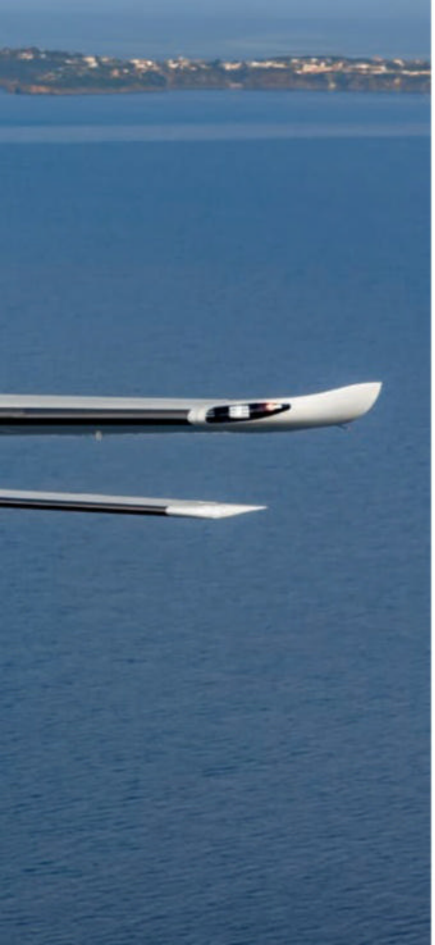
Compared with a light aircraft, the Traveller controls feel heavier, but are easy to operate, assisted by powered trim in all three axes. That means you need to be very good with the electric trim, in three axes.

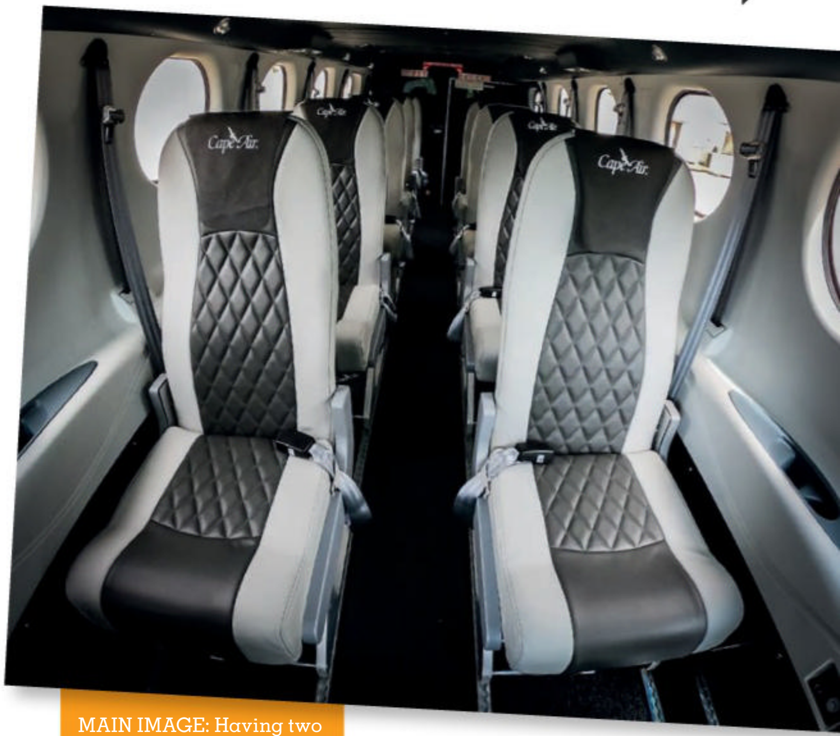
There was other traffic at Wangaratta, so we did a mid-cross wind join for runway 36. When it came to my first landing, I was disappointed. I had watched other more experienced pilots land too hard on their first attempt. Despite telling myself not to, I did too. Nothing dangerous but not to the required professional or personal standard. Number two was better, and number three and beyond, near perfect.

The key to good landings in the Traveller is to hit the numbers. It must be flown on, with power, not glided in. Specifically, rpm needs to be 2,300, reference speed on final 85 kts (varies with weight), the angle of attack indicator right on 0.6 (being 1.3vs in any configuration). Once 0.6 is made and 85 kts set, the attitude and power are held until the split second of touchdown, and only then power should be cut. Then comes more critical items. The control column must be held back to prevent the nose-wheel touching down too hard, and for a go round full power must be applied smoothy without delay. I was too quick the first time, and was thankful for FADEC control, that prevented any engine damage. FADEC is good for operators with low time pilots.

We conducted a few more circuits, including flapless, glide, and go rounds, before landing to use the facilities and starting up again.

As the weather had closed in, we filed an IFR plan back to Essendon and flew the ILS to runway 26 through the clouds. The Traveller's GFC 700 autopilot flew the localiser and glideslope perfectly, before I took over for a textbook landing.





MAIN IMAGE: Having two engines is reassuring over water

ABOVE: The Traveller, its all about the passengers

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MAIN IMAGE: The Traveller has the luxury of multiple doors for pilots, pax and baggage

ABOVE: High props avoid FOD

Day 2 – IFR and emergency procedures

Day two was easier as I had mastered landings and was experienced flying IFR in an albeit smaller Tecnam twin. So, the concentration for the IFR return flight to Wangaratta, was on emergency procedures. Maglogiannis created multiple simulated emergencies, asked what I would do if a range of warning lights came on: high fuel pressure, high oil pressure, ADC/AHRS failures, and more. Usually, they involved getting out the POH and running the checklist.

There were multiple simulated engine failures of both the critical left engine and right. I was required to quickly go through "Pitch up, power up, flaps up, gear up (fixed), identify and (simulate) feather," then hold a five-degree bank towards the good engine to maintain altitude or climb to safety.

At Wangaratta we flew the RNAV to runway 18, including a hold at the initial fix of November Alpha. Flying well at first, but then coping with the bigger aircraft, I lost the descent profile. Said Maglogiannis, "That's not up to commercial standard, you can do better, let's do it again." After flying to just above the minimum descent altitude (MDA) to the runway, I went missed and we went back to November Alpha for another approach, this time to standard.

We also practised engine failures in the circuit, down to the landing. When unfeathered, at near MTOW, the climb rate would be negative or close to zero. The simulated feathering was to make sure I was 100% on my game. Initially I was a little too slow. Maglogiannis made me practice until he was happy.

We headed back to Essendon and were given the short cut direct to Monty, but vectored through the localiser by the controller, as we were number five for the approach behind air ambulance and police aircraft. This is not unusual at YMEN, and we were soon vectored back for a perfect ILS and landing.

After a short debrief, Maglogiannis said, "That was good, I am happy to sign you off." A couple of days later I received a loverly certificate from AVIA.

Getting out there

Once you have been signed off in the Traveller, for insurance coverage you will need 25 hours command under supervision to be able to fly as PIC. This could be done with an existing operator, or on a ferry flight of a new aircraft from Italy.

Over all impressions and lessons

It is a big step up to have so many lives under your responsibility. The Traveller, while offering twin engine safety and lower operating costs than a turbine single of the same size, does require a serious professional attitude, more training, and a commitment to both hit the books beforehand, and hit the numbers when flying.

Says Maglogiannis, "Understanding how the systems work is a crucial part of flying a complex multi-engine aeroplane. Know your one engine inoperative procedures, more horsepower requires a quicker reaction time. Stay current with training and regulations."

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Jabiru's J430 LSA is ready for a 760-kg MTOW once the MOSAIC is finalised and adopted in Australia.

Jabiru's New Future

Steve Hitchen spoke with new Jabiru Executive Director Michael Halloran about the path he has laid for the company's future.

J-230
Jabiru

> "In a few weeks time, when the Australia aviation community turns its attention towards Avalon, Jabiru Aircraft will showcase the complete range of products"

Jabiru Aircraft went though somewhat of a revolution last year when ownership passed out of the hands of the Stiff family for the first time since the company was founded.

But in the hands of its new owner, engineer Michael Halloran, the revolution might just turn into a renaissance.

Rod Stiff, who founded Jabiru in 1988 with colleague Phil Ainsworth, was looking to retire when he placed a phone call to Halloran, a former Seabird Aviation engineer who had worked with Jabiru early in his career.

Halloran was the CEO of military vehicle manufacturer Supacat, which he expected would be the final step in his career. Stiff had something else planned for Halloran.

"Rod got to a point where he was looking to sell Jabiru, and gave me a call about two-and-a-half years ago," Halloran recounts. "At that point I was fully engaged with other things.

"About six months later he called me back again and said he preferred to sell it to me, so we went through the process and came to an agreement about 6-12 months later, and I took over the company in May 2023.

"It's a nice opportunity to come home, so to speak, and finish my professional career doing something with Jabiru again."

Halloran kept Stiff's daughter Sue Woods on board as General Manager, and spent the first year in deep examination of how the company operated.

"I spent the first 12 months looking, watching, learning," he told *Australian Flying*. "I have enormous respect for what Rod and Sue have done over the past 30 years and my first thought was to try not to break the magic.

"I did a lot of work on the safety data. The ATSB let me access the data base and I was able to understand where we stood. I went around flying schools and talked to people and got an understanding about where the business stood in the market."

It's fair to expect a new Executive Director to put their own stamp on a company and start making changes to maximise the opportunity they recognised when they assumed the leadership, but in Halloran's case that hasn't been easy to do; there was not a lot that needed changing at the Bundaberg plant.

"I couldn't find a penny of cost to take out of the business; it had been run extremely efficiently. Rod and Phil's view was always affordability and making aviation available to everybody. In that sense, they ran the business very efficiently.

"And everywhere here know their stuff. Most have been here around 20 years, so there's a huge amount of skill and capability inside the business. That's part of

ABOVE: Jabiru's 4th generation engines have been one of the company's success stories.

LEFT: Halloran struggled to take cost out of what was already a very trim manufacturing and maintenance operation.

why the quality is always good and the products themselves are great products."

Changing the face

Although the internal workings at Jabiru needed little attention, Halloran admits the external interface with customers and stakeholders could be better. The company had gained a reputation for not communicating very well, exacerbated in 2014 when CASA applied operational restrictions to aircraft with Jabiru engines over safety fears.

With engineering changes and the Generation 4 motor seemingly solving that problem, Halloran can turn his attention to engagement.

"The external face is Jabiru's main weakness," he says. "The engagement with stakeholders and customers could be better. That's where we intend to make it different.

"It's about engaging and communicating with Jabiru folk in all their varieties, that's really key for us.

"What I want to build is an ecosystem of sorts, where we engage with pilots, owners, maintainers, regulators, everybody. I want to be able to get safety data out to people easily and efficiently.

"It's not such a big community that we can't be talking to people directly. We don't need social media to be our bullhorn, there are ways we can directly communicate with people."

Jabiru currently offers the J230 and J170 LSAs, a J430 four-seat kit and has a J432 Twin Jabiru kit under development. It's a relatively stable offering, and Halloran is resisting redesigns or clean-sheets in favour of evolving the existing products.

"I think the J170 and J230 are great products as they are; I don't think there is a need to reinvent the wheel in that sense," he explains. "However, there is a lot of technology around that we can incorporate, and I think the thing for us is to incorporate that intuitively to increase both safety and the crew experience.

"That's the product evolution we're looking for, adding to Rod's original design, because I don't think we can design a better product than that."

However, sometime this year the entire GA industry will change, when the Federal Aviation Authority in the USA releases its new rules surrounding LSAs. Known as the Modification of Special Airworthiness Category (MOSAIC), the rule set will open the category to new designs, technologies and weight limits.

Those limits are expected to permit Jabiru to factory-build aircraft for Recreational Aviation Australia's (RAAus) new Group G.

"The primary thing MOSAIC will mean for us is that we will have a factory-built product suite," Halloran points out.

"The J170 will stay around the 600 kg MTOW because that's its natural weight, but the J230 will be able to go to 750-760 kg MTOW. We'll be able to factory-build the J430 and the twin J432 directly into RAAus' Group G."

> **"I have enormous respect for what Rod and Sue have done over the past 30 years and my first thought was to try not to break the magic."**

What's next?

At its prime, Jabiru Aircraft was turning out a lot more airframes than it is now, and Halloran acknowledges the need to get more from the market, but also understands that the spare capacity could facilitate new income streams.

"UAVs are a new business stream for us," he says. "We have contracts with the ADF to develop a rotary-wing drone. We're also working with another couple of companies to turn our 230/430 airframe into a fixed-wing drone, that could carry 400 kg or so payload.

"The beauty of that is that 80% can come off an existing production line. We may need to expand the Bundaberg plant a little bit, but not significantly. In the early 2000s there were 20 aircraft a month coming off the production line, so there's enough capacity there, it's just a matter of how we do it."

And in a few weeks time when the Australia aviation community turns its attention towards Avalon, Jabiru Aircraft will showcase the complete range of products and technology.

"We will have a major presence at Avalon this year, with a J170, J230 and a J432," Halloran says excitedly. "We'll have some of our UAVs and hopefully a fuel-injected engine there.

"There won't be any great revelations, but we will have the full suite of products that we expect to go forward with in the next five to 10 years."

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A Kodiak Moment

Filip Modrzejewski reports from Poland, where he flies the country's first Kodiak 100.

With an MTOW of almost 3.3 tonnes and the ability to carry up to 10 passengers on board, the Kodiak is impressive

The Kodiak 100 has long been on my bucket list, both to photograph and to fly. As soon as the news came out that an owner from Poland had purchased this type of aircraft (thanks to the cooperation with Plane4You), in addition to a special paint scheme, I could not let go of such an opportunity.

Jakub Sliwinski and I arrive at Gdansk airport in the afternoon, with a few clouds in the sky, and thunderstorms in the area; typical July weather. Despite this, the forecast looks good, so it will be time well spent. Especially since Dominik Punda, an experienced pilot who has flown this aircraft from the USA to Poland and also flies with the owner on a variety of flights, is waiting for us on site.

Introducing the Kodiak 100

We park in the stand next to the Kodiak and immediately notice that, compared to the aircraft we flew in (a Cessna 172), this is a much bigger machine. With an MTOW of almost 3.3 tonnes and the ability to carry up to 10 passengers, it is impressive. The main difference is the height (more than 4.5 metres); being used to having the aircraft at eye level from other GA aircraft, here you have to tilt your head up a bit.

Dominik is already waiting for us at the plane with chilled bottles of water, a must in weather like this, then it's time to explore the interesting features of this aircraft. The first thing we look out for are the low-pressure tyres. "This is one of the many features in a variety of bush planes. Thanks to these tyres and the very robust design, we can easily take off from any grass field, even if the terrain is wet or uneven. On the other hand, these tyres also help when landing on concrete strips; as soon as the plane touches the strip, they almost immediately stick to the ground and it is very difficult to bounce or do a so-called kangaroo landing," says Dominik.

Another thing that strikes us is the extra cargo pod underneath the aircraft, which on the one hand adds a bit of drag to the aircraft, but thanks to the slim shape, the differences in handling and speeds are almost unnoticeable. "Some versions of the Kodiak use this space for special sensors or cameras for observation. In this cargo compartment at the front, we have space for the TKS system (de-icing system) and fluid, followed by two huge luggage compartments and a third smaller compartment where we can easily store all the things related to the aircraft like extra cleaners or engine safety items or the pitot's tube cover."

An aluminium fuselage, weather radar or anti-icing system are all classic features on an aircraft of this class. Dominik points out one more thing; pressure refuelling via a single point. "This is a huge convenience compared to similar aircraft - there is no need to climb onto the wing or use a ladder, just connect the fuel from the bottom of the wing. In addition, thanks to the single refuelling point, we can refuel the aircraft much faster and easier, and the fuel will be distributed over two tanks, one in each wing."

Climb aboard

The overall appearance is impressive, especially in black and grey with red accents. From the pilot's point of view, there are doors that open from both sides of the cockpit, and we enter via a step that is permanently mounted under the door. It's worth mentioning that the Kodiak has a magnetic door: when opened, the

CREDIT FILIP MODRZEJEWSKI

door is attached to fuselage at the front and you don't have to worry about leaving it open or hitting the fuselage or bolts.

The cockpit was designed from the start with the Garmin G1000NXi avionics in mind, which is very obvious when being looked at; all the equipment fits well together and the size and ergonomics of the cockpit are sensibly considered. "Comfortable seats help on longer flights, and the dual-zone (cockpit and cabin) air conditioning system works well on hot days. In addition, everyone on board and the passengers have access to oxygen, so we can easily fly up to FL250," adds Dominik.

As a passenger you enter the aircraft through the rear cargo door, which has fold-out steps. The large cargo door also allows up to 1.5 tonnes of cargo to be easily loaded on board. Examples can be found where pilots have flown Kodiak with bicycles or motorbikes in the back without having to disassemble the machines.

This particular aircraft has six seats in the passenger compartment, which can be easily moved on special rails. An additional two seats can be added if required. The interior is top of the class: the entire cabin is spacious and finished as if you were on board a business jet rather than an STOL aircraft. Bright upholstery, folding tables, charging sockets and an additional ventilation or lighting system all enhance the Kodiak's high style and comfort. One wonders whether it is better to fly here as a pilot or as a passenger...

STOL capabilities

The Kodiak 100 is clearly an STOL (Short Takeoff or Landing) aircraft. Despite a take-off weight of over 3 tonnes and a top speed in the region of 180 kts, it only needs 60-70 kts and about 250-300 metres of runway to take off and land. This is better than most smaller GA aircraft and is impressive to observe both from the outside and the cockpit.

The PT6A-34 turbine engine produces 750 shp of power and, as Dominik says, "we can fly this

MAIN IMAGE: There are doors that open from both sides of the cockpit and entry is via a step that is permanently mounted under the door.

BELOW: With more than 1,100 nm of range, almost all of Europe is within reach, plus we can land at almost any airport.

RIGHT: Comfortable seats help on longer flights, and the dual-zone (cockpit and cabin) air conditioning system works well on hot days.

aircraft to almost any grass field". Daily, the machine is stationed at Plock, which has only 730 metres of grass strip - "By practising touch and gos, we can easily do a full stop and take-off on the same strip. When I arrive at the airport with other aircraft, we have to keep everything under control and can only touch the ground with the wheels, still having a narrow margin. The Kodiak is a completely different subject. This is also confirmed by the fact that on very warm days, with seven people on board and the full allowed amount of fuel, there is no problem at all with take-off. This is also supported by the wing design using a discontinued leading edge.

"So far we have already visited a couple of ultralight airfields and other smaller aerodromes such as Mrągowo or Pacułtowo. Our plans for autumn include flying over small airports in the Tatra Mountains or Bieszczady like Olcza (near Zakopane) or Żar. Recently, we also flew to Tivat, where we took advantage of the high-speed capabilities and reached our destination in only four hours. With more than 1,100 nm of range, almost all of Europe is within reach, plus we can land at almost any airport," says Dominik.

Differences and similarities

The question naturally arises as to how the Kodiak 100 differs and in which ways it is similar to its competition, primarily the Cessna Caravan. Both machines are similar in terms of handling, but there are a few differences worth noting. In addition to the features we mentioned earlier, the Kodiak has a slightly taller cabin, which improves travel comfort. Additionally, being a new design, it is also more modern and sleeker compared to the Caravan.

While the Cessna Caravan is cheaper to buy, the Kodiak 100 is much cheaper to operate (based on cost per hour), can fly faster and has a better range. In addition, the newly designed undercarriage is more robust, which improves operation from unpaved surfaces alongside low-pressure tyres.

In terms of popularity, the Kodiak is a much newer and sleeker design. More and more people and companies are starting to take an interest in both the Kodiak 100 and the latest Kodiak 900 model. In terms of STOL characteristics, the Kodiak has a significantly shorter take-off and landing. It is difficult to say unequivocally which machine is superior, as both types are designed for similar applications, and each owner must answer for themselves which aircraft will perform better for their purposes.

Training

I wouldn't be myself if I didn't ask Dominik about the training process for this aircraft. "To fly the Kodiak, you need to obtain a Type Rating SET Kodiak 100 (SET - Single Engine Turbine) for this aircraft as it has a turbine engine. This is a very similar rating to the popular Piper SET or Cessna SET. The theoretical part is about 18 hours of ground school and the practical part is 6-8 hours of flying depending on your previous experience and IFR ratings," says Dominik.

In Europe, the training centre is the Rheinland Air Service located in Germany, and practical training comes down to operations with a turbine engine and practising take-offs, landings and emergencies. Importantly, despite the Kodiak being a much larger and heavier aircraft, we only need a PPL licence to obtain the rating and the entire training can be completed in a few days.

Let's fly!

Sunset is approaching, so it's time to fly over the Bay of Gdansk and Hel for photos and see how the Kodiak behaves in the air. I take a seat in the photo ship (C172), while Kuba and Dominik are at the controls of the Kodiak.

Start-up is very simple and the characteristic sound of the turbine revving up is music to the ears. The aircraft is ready to fly in a few minutes, and there is no need for an additional engine check, so we just configure the G1000's avionics with the route, activate the air-conditioning system (this is an extra screen in the cockpit, which is hard to notice at first look) and taxi to the runway. Take-off is instantaneous - what's interesting is that we take off with 20-degree (2nd-stage) flaps, instead of 10 as with most aircraft. After about 200 metres we reach 60 kts and smoothly rotate up, climbing at 85-95 kts.

The Kodiak is a much heavier

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machine, so it can be a little more challenging at first for people who are used to smaller and lighter aircraft. It generates a lot of torque from the propeller on take-off, comparable to flying an AN-2 or a PZL Gawron, so we have to be 'ahead of the plane' in every phase of the flight to manage the energy properly.

In the air, the aircraft is very straightforward, stable and pleasant to handle. The fuel burns down evenly from both tanks, so we don't have to worry about switching them manually, and the machine is very pleasant to fly behind the hand. "The volant is designed well, but it could have been a bit bigger, as the left-to-right turns are not very comfortable," mentions Dominik. Accelerating to 170 kts takes only a moment in level flight, yet on the other hand, we have no problems slowing down such a large aircraft to 100 kts for formation flight.

After a few manoeuvres in the air, while admiring the cockpit in the beautiful surroundings of the Baltic Sea, we head back to land at Gdansk airport. We make a short landing here, approaching at 75 kts. "This is one of the most critical phases of the flight. We have to be much more careful about energy loss and plan our touchdown accordingly because the turbine engine has a much slower acceleration and does not follow the hand as quickly as the piston engine," Dominik explains. After touchdown, we put the engine into reverse mode, apply brakes and the Kodiak stops in less than 300 metres - an impressive result.

There is no doubt that the Kodiak 100 is a well-designed aircraft with modern features. STOL characteristics, a large and elegant cabin, comfortable operations, and high payload with a very good range and speed are its big advantages. The first model is already flying in Poland, while more and more of these machines are appearing in Europe. We hope that this trend will continue and expand in the coming years.

Specifications

Crew:	One person
Capacity:	Up to nine passengers
Length:	33 ft 10 in
Height:	14 ft 8 in
Wingspan:	45 ft
Wing area:	240 sq ft
Powerplant:	Pratt & Whitney PT6A-34 turboprop, 750 shp
Propellers:	Four-bladed, constant speed, feathering, reversible
Empty weight:	3,775 lb
Maximum gross weight:	7,305 lb
Useful load:	3,530 lb
Fuel capacity:	320 gal
Baggage capacity:	248 cu ft
Service ceiling:	25,000 ft
Takeoff distance:	934 ft
Landing distance:	765 ft
Cruise speed:	178 KTAS (205 MPH)
Range:	1,005 NM
Loiter time:	10 hours
Balanced field length:	1,550 ft
Cabin height:	4 ft 6 in
Cabin width:	4 ft 9 in
Cabin length:	15 ft 10 in

BELOW: An aluminium fuselage, weather radar or anti-icing system are all classic features on an aircraft of this class.

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Avalon 2025 is only a few weeks away, prompting **Steve Hitchen** to go in search of what the Australian International Airshow is preparing to serve up to the aviation community and the general public.

Aviation's Big Show

Often, an Australian child's first close-up encounter with the grass roots of aviation happens at the Australian International Airshow. Common are stories of inspired children who once marvelled at what they saw at Avalon, who today ply the skies in command of airliners, high-tech fighters, medevac helicopters, GA utility aircraft and aerial ag wagons.

They are evidence of the power of Avalon to inspire and grow aviation at all levels. One of those levels is general aviation, which stands to benefit from a strong presence at Avalon 2025, now only a few weeks away.

Despite our passion for GA, we have to admit that we are not a strong enough drawcard for the general public; the very people we are looking to inspire. However, GA will gain collateral exposure from what the people do come to see: the fast, the powerful, the skilled and the amazing.

Like Avalons before, this year's show won't be lacking any of those things.

The fast and furious

The Australian Defence Force takes Avalon seriously. They know the general public flocks to the gates to see them on the weekend, so the show is a major recruiting tool for them. As is customary in the lead up to the gates opening, the ADF has promised to bring along one of almost everything with a roundel on it. That comes with the qualification that everything is available on the day and not distracted by operational needs.

Fast jets on the agenda include crowd favourites like the F-35 Lightning II, F/A18-F Super Hornet and EA-18G Growler; the Roulettes with their PC-21s and the best of air mobility with the C-17 Globemaster, C-130J Hercules and C-27 Spartan. Further scheduled are a P-8 Orion, E-7A Wedgetail and Australia's indigenous drone, the MQ-28 Ghostbat.

Whilst all of the above is air force, the Australian Army is telling us they'll have an ARH Tiger and CH-47 Chinook as static displays, whilst the RAN will chip in with static and flying MH-60R Sea Hawks, and a static EC-135.

That's the current fleet, but the RAAF, through their PR vehicle 100 Squadron will also commit the bulk of their heritage fleet, which consists of Spitfires, Boomerang, Canberra, Meteor, Vampire and a number of other classic warbirds significant to the heritage of the RAAF.

And it's not only our defence force that place a high value on Avalon, air assets from the USA, Malaysia, New Zealand, Singapore, the UK

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ROYAL AUSTRALIAN AIR FORCE

STEP IT UP A NOTCH IN A WT9
GARMIN

MAIN IMAGE: Paul Bennet's SkyAces team have matured into one of Australia's best formation aerobatics teams.

RIGHT: The Australian International Airshow is always a major point of contact with the public for the RAAF.

BELOW: Several new models of aircraft are expected outside at the GA expo, including the WT9 Dynamic.

and so many other nations have contributed to the air display over the years. We've even had Russians before ... although they are unlikely to pitch in this year.

That has bought to our shores many aircraft that the ADF doesn't operate. Over the years we've seen F-15 Eagles, F-16 Viper/Fighting Falcons, B-1B Lancers, B-52s, KAI T-50Bs, Panavia Tornadoes, Nimrods and a handling demonstration from the RNZAF's B757. Go back through your own archives; you'll find a lot more to add to that.

Last year the stars of the show, hands-down were the South Korean Black Eagles, whose display of precision formation aerobatics was both exciting and original. Could we see them return in 2025? Or, does Avalon have another surprise in store?

That's the thing; you just never know.

The master blasters

High-energy aerobatics have been one of the key drawcards since the inception of the Australian International Airshow, featuring the best display pilots from Australia and internationally. Whilst military jet fighters might be aspirational for most of the crowd, civil aerobatics demonstrate what could be within the reach of anyone who has the passion for it.

That passion will be on show in the form of Matt Hall Racing and Paul Bennet Airshows. These two exponents have become must-haves on the Australian air show circuit, and every two years they bring their best to Avalon.

For MHR that means some precision flying laced with a touch of excitement from Hall himself in his MXS-R and colleague Emma MacDonald in an Extra 300L. This is eye-opening stuff that never gets old and continues to extract some of the loudest exclamations from both aviation enthusiasts and

MAIN IMAGE: International displays have been a feature of Avalon over the years. In 2023 South Korea's Black Eagles stole the show.

ABOVE: 2025 marks the centenary of de Havilland's Moth series of aeroplanes, of which the Tiger Moth was the most prolific.

general public alike. Sky dancing at its best.

Paul Bennet is slated to bring his SkyAces biplane team to Avalon with him, which means himself in the boisterous Wolf Pitts Pro faithfully followed smoke and all by three Pitts Specials. This team has evolved into one that functions as well as any other in the world, and you can bet they'll blow away the audience with skill and imagination.

And now for somethings completely different from Bennet, his organisation will also attempt to land a Piper Cub on the back of a moving truck and complete a night pyrotechnic sequence in a Cessna 185. The truck trick is as old as air shows themselves, but it never gets tired because each time it requires levels of skill and accuracy that most aviators kid themselves they can match.

Pulling it off is always something that warrants applauding... loudly.

> **"It requires levels of skill and accuracy that most aviators kid themselves they can match."**

Halls of exposition

For the first time at Avalon, the exposition will consist of four halls, with Hall 4 dedicated completely to companies and organisations that wish to engage with the general public. This innovation will enable the organisers to shut the other three halls on the weekend. Consequently, if you're seeking companies that are in either Hall 1, 2 or 3, you'll need to be there on the trade days.

Why?

"Grouping organisations wishing to engage with public air show visitors into Hall 4 is based on exhibitor post-event feedback over a number of years," an AMDA Foundation statement reads. "While many exhibiting organisations look forward to engaging with the general public, others with a purely industry focus see less value in maintaining personnel and security on an exhibition stand across the weekend air show.

"Grouping public-facing companies in Hall 4 will ensure air show visitors are surrounded by organisations that wish to engage with the general public, creating better outcomes for both industry and visitors."

Adding a fourth hall will expand the floor space by 30% over previous years.

If Avalons past are an indicator of Avalons present, the expo halls will include displays from the all the heavy-hitters of commercial aviation and defence, as well as associations, software and equipment manufacturers, state governments, regulatory bodies and every breed of supplier you can imagine.

Expect the Avalon 2025 expo to feature emerging technologies like alternative propulsion, uncrewed systems and advanced air mobility in significant presence. Some of these are on the cusp of commercialisation, with companies vying for the attention of potential customers as they jostle to establish themselves as market leaders.

GA on the ground

AMDA Foundation has been keen to get greater general aviation involvement over the years, and in 2023 relocated the GA/sports aviation precinct to a prime spot near one of the entrances. Previously, it had been situated in the outfield where the paying public were often loathe to tread.

The precinct is back for 2025 with a site near the newly-added Exhibition Hall 4, and AMDA Foundation has reconfigured the precinct design to create more efficient flow of people to and from the GA sales area.

"The General Aviation Pavilion is now in an area bordered by the main exhibition halls, the Careers and Skills Hub and the amusement rides area, so we're expecting a lot of traffic through the area as people move between the airshow viewing and these other attractions," AMDA Foundation CEO, Justin Giddings said.

"The updated area will feature a main hall for seminars and panel discussions, an exhibition marquee for attending aviation associations and an interactive centre with hands-on activities, helping visitors learn about various roles and careers in the aviation industry."

At the time of writing, around 120 GA aircraft are expected to be displayed at Avalon, with exhibits from eight museums and five major GA associations including

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Recreational Aviation Australia (RAAus) and Sports Aircraft Association of Australia (SAAA).

For many in the GA community, Avalon is a chance to inspect new models, talk with technical experts and evaluate aircraft against each other. The expo is often the closing ground for aircraft sales already nurtured, with Avalon 2023 almost universally cited as the best ever.

Aircraft booked for ground space include:

Airflite
- Piper M500 and M600
- Kodiak 100

AvXen
- Aerospool WT9 Dynamic

Cirrus Australia
- SF50 Vision
- TRAC20 (the training version of an SR20)
- SR22T G7 Australis

Jabiru Aircraft
- J170
- J230
- J420

Tecnam Australia/Hallmarc Aviation
- P2012 Traveller
- P2006T MKIII
- P2010 Gran Lusso
- P-Mentor
- P92 Echo

Utility Air
- Diamond DA40
- Diamond DA50RG
- Diamond DA62

Add to that the usual battery of business jets that inhabit the taxiways, helicopters and all sorts of sundry aircraft and you can see the strength of the general aviation presence shining through.

MAIN IMAGE: Avalon is set to draw huge crowds in 2025

ABOVE: The USAF always brings things fast and loud, like the F-22 Raptor.

In tents conversations

Although the expo and air show are the main drawcards, a large part of the Australian International Airshow are the conferences and seminars that are held on the side. This creates a complete event that covers everything from engineering, regulation, technology, management systems and innovation. Up-to-date subjects set to be discussed at Avalon 2025 include:

- aerospace
- UAS
- space
- defence
- robotics
- supply chains
- airports
- regional aviation
- careers and STEM.

Short sessions will be collated into the Avalon Hub Program. This is a collection of presentations that would normally not warrant a full conference or seminar, but nevertheless still contains important information for the aviation industry. Running for about 30 min each, the Hub Program consists of 15 presentations spread across the Wednesday and Thursday. The highlights include sessions on:

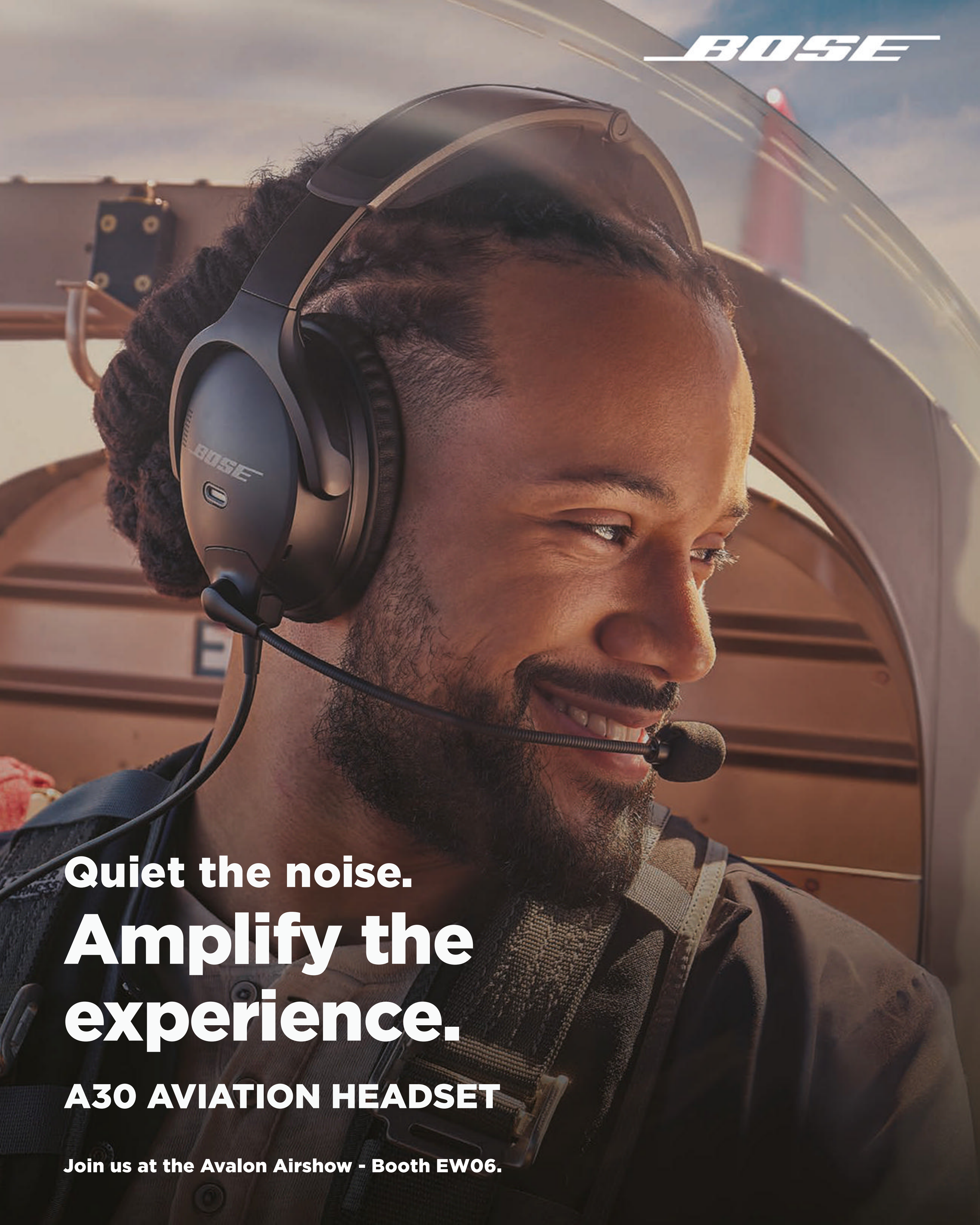
- aviation medicine
- contracting to the US DoD
- Bell 525 Relentless
- emerging technologies and threats
- Australia's space capability
- Advanced air mobility (AAM)
- Flight simulators.

Schedules for both the conference and Avalon Hub programs are on the Avalon 2025 website, which enables visitors to do some programming of their own.

100 Moth years

Avalon 2025 presents a chance to mark a significant centenary: that of the de Havilland Moth range. The first, DH.60 Moth G-EBKT, flew on 22 February 2025, with Geoffrey de Havilland himself at the stick. Several variants followed, the most prolific being the iconic DH.82 Tiger Moth, which trained generations of military and civil pilots and remains an active GA model today.

To mark the occasion, the Antique Aircraft Association of Australia (AAAA) is set to stage a Frozen Five formation of Tiger


BOSE
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DIAMOND AIRCRAFT

MAIN IMAGE: Utility Air will have an example of the Diamond DA50RG on static display.

LEFT: The GA precinct at Avalon 2023. AMDA Foundation says it will be enhanced for this year's show.

Moths, and is expected to display up to 10 Moths of all varieties.

Justin Giddings, CEO of Avalon 2025 organiser AMDA Foundation, said the Moth range made a significant contribution to Australian aviation history.

"From training Royal Australian Air Force, Empire Air Training Scheme and Navy Fleet Air Arm pilots, to being employed as agricultural and flying club aircraft after the war, the Tiger Moth has played a part in both military and civil history," Giddings said.

"We built more than a thousand Tiger Moths at Mascot near Sydney and made the engines at Fishermans Bend in Melbourne. Even after a century, the aircraft is still making a living today operating scenic and air experience flights and training for tailwheel endorsements across Australia."

Other Moths in the series include the Fox Moth, Leopard Moth and Hornet Moth.

About Avalon 2025

The Australian International Airshow is on at Avalon Airport, near Geelong, from 25-30 March 2025. The Tuesday, Wednesday and Thursday are trade days only, with the general public gaining access from the Friday onward. Trade day visitors need to register at the Avalon 2025 website. Ticket prices are:

- General admission over 16 years: $98
- Concession: $77
- Children 4-15 years: $25
- Children under 4: free
- Family of 2 adults and 2 children: $221
- Gold Pass Grandstand 1,2 or 3 days: $245, $440, $660

Avalon 2025 will not offer aircraft parking for light aircraft other than general aviation display aircraft on exhibition stands.

Light aircraft will be instead directed to Lethbridge Airport (YLED) 19 nm west of Avalon, where onsite camping facilities, portable toilets and showers, food and bar services, camper van parking will be situated. Shuttle buses to the air show entry gates will run regularly.

Everything you need to know about the show: www.airshow.com.au

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Jim Davis has a passion for instructing. He has been training civil and military pilots, in the air and on the ground for 50 years. His other passion is writing, which he studied at Curtin University in Perth. You can see, and buy, his two pilot text books PPL and Flight Tests at www.jimdavis.com.au

Getting Your Hands Dirty

Jim Davis brings us another lesson on the effects of controls.

If your pupe drives an automatic car, then she has only one power control. And she does it all with her right foot, nice and easy and predictable. Plonk her in the left seat of an aircraft that was designed 70 years ago and things are very different.

In her car, she doesn't have to consult the met office to find out whether the engine might die when she takes her foot off the gas. She doesn't run out of fuel if she forgets to adjust the mixture on a long trip. She doesn't have to prevent the car from heading to the left ditch when she puts her foot down. And the steering doesn't go all soggy and ineffective at slow speeds.

So you have to teach her to understand four controls: the throttle, the mixture, the carby-heat and, on some aircraft, the pitch. Four interdependent levers. Whatever you do to one is likely to affect the others.

My friend, Richard, who is good at sums, tells me that the permutations or possible combinations of what those four levers can do is 4! This is maths shorthand for four factorial, which means 4x3x2x1=24. That's 24 different combinations if each control only had on and off positions. But they don't, so we are have thousands of possible combinations to remember.

Obviously this is not going to work.

The only way to get her head round the operation of those four power levers is to *involve* her. Make her roll up her sleeves and get her hands dirty while prodding and poking at the bog-roll sized thing, the carburettor: the very heart of the aircraft.

Let's side-track for a moment.

In 1920, According to Comrade SW Sparrow, then of the National Bureau of Standards, carburettor icing accounted for 'many unexplained aeroplane crashes'.

By the time the experts gathered round the wreckage and gave their opinions, there was no sign of the mechanical failure that the pilot claimed was the cause of the calamity. In short: the ice had simply melted without trace.

I had similar disappointments with my MG TA, a pre-war version of the TC. I owned this car not because it was cool, but because it was cheap. A tatty one cost £45 and a really good one about £60. It produced a modest 50 hp and would be beaten away from the lights my most family saloons.

But that was before I glued on an old Shorrock supercharger. Wow, what a difference that made. The engine was as smooth as silk, it used less fuel, if driven conservatively and it almost doubled the horsepower. Apparently the smoothness and economy were because the supercharger really churns up the fuel-air mixture.

However, the big SU carburettor that I salvaged from a Rover 90, wouldn't fit under the cowling, so I hacked a hole in the latter so that the former stuck out the side. Every now and then the car would unaccountably stop. I would blow in the tank and bash the electric fuel pump with a half brick and then off we would go again.

The MG's problem was not heat, but humidity. Not to make a mystery of it, I eventually found condensation dripping off the outside, and the inside looked as if it had been subjected to a young snow storm.

All of which is a short introduction to the fascinating world of aero engines which can suffer from equally undetectable ailments.

I have had magnetos which developed internal arcing at high altitude where the thin air is not much of a insulator. Obviously there is no sign of the problem on the ground.

Now carby-icing is a thing of the past, provided the spotty 20 year old has his wits about him.

And that, dear instructor, is where you come in. There are two ways of doing this: you can either show your pupe beautifully coloured, but nonsensical charts of dewpoint versus temperature, and give her easily forgettable lists of rules to follow. Or you can engender, into her young life, an abiding fascination for the machinery that will carry her aloft.

Have a look at this carby-icing chart, but don't look too long: it's useless, academic stuff which doesn't work in the real world.

I'm trying to make a point here. If you want your pupe to

A pilot's logbook is far more that just a record of dates, times, places and flights; it is also a history of a pilot's flying career and a chronicle of the lessons learnt that makes them the aviator they are today. Jim Davis takes a look back through his own logbooks, and records the incidents that have shaped his approach to flying.

understand the mechanics of the aeroplane, and it's your bounden duty to do so, then you both need to get your hands dirty.

Again, the golden rule: *Tell me and I will forget. Show me and I will remember. Involve me and I will understand.*

Telling doesn't do the job, showing doesn't do the job. You need to get the cowls off, and then get her to watch what happens while you climb inside and move the carby-heat lever.

It's all down at the bottom and you probably need a torch while you prod, poke and discuss. Get her to show you how the butterfly selects the air from either the air-filter or from the hot-box. And get her to explain why the carby-heat won't work if she lets the engine stop. And how she could use it to regain power if a bird blocked the filter.

Let her explain why she should not test the carby-heat on a dusty surface.

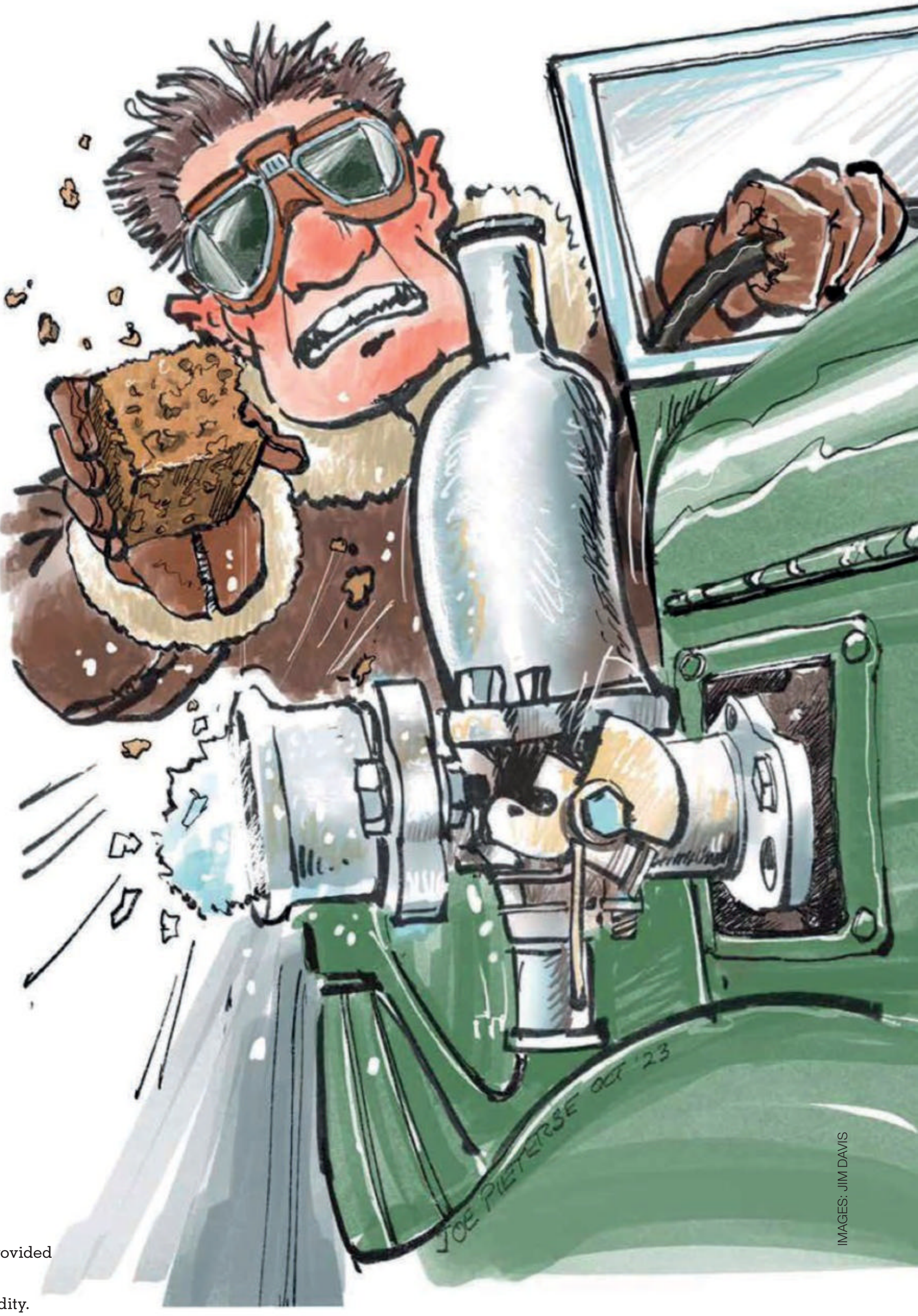
Get her to work out why she can never flood all the cylinders by over priming.

Involve her.

Next time she does a preflight she will know what she's looking at. And next time she moves the carby-heat lever she will picture what she's doing under the cowl.

Get her to think about the potential for CO2 poisoning. Do it on a day when the weather is against flying, speak to the AME and ask if you can show her around the hangar and look at an aircraft with the cowls off.

It's not just about the mixture and the carby-heat and the throttle; it's also about how they interact with each other.



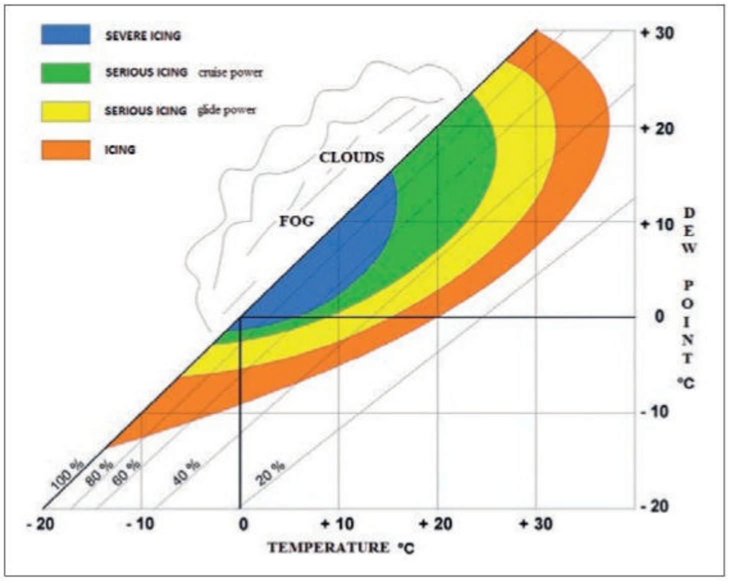
IMAGES: JIM DAVIS

RIGHT: Now carby-icing is a thing of the past, provided the spotty 20 year old has his wits about him.

LEFT: The MG's problem was not heat, but humidity.

RIGHT: The Lakes Buccaneer high thrust line feels uncomfortable and dangerous.

BELOW: Have a look at this carby-icing chart – it's useless, academic stuff which doesn't work in the real world.



How the carby-heat causes the mixture to become too rich, meaning that you should always clear any potential ice with the carby-heat before you lean the mixture.

Here's a question: you are flying straight and level on a silky smooth day, and you have everything trimmed hands off. What are the first two indications of carby-icing?

So as the ice gradually forms in the carburettor's venturi, it restricts the flow of air and this causes a slight loss of power and a richening of the mixture. The power loss is so slight that you won't pick it up on the rev-counter. This is because the nose will drop slightly, and the airspeed and revs will remain the same. Sound unlikely? It's exactly what happens.

And when you notice this slight loss of altitude what do you do? You nudge the trim up slightly.

Of course that will sort out the initial tendency to lose height, but it will also cause a very slight drop in airspeed and revs. If you don't notice this then the cycle starts again. As the ice develops, a slight loss of power and height occurs and a bit of re-trimming is followed by another slight loss of revs etc.

Then you suddenly wake up, the throttle has slipped a bit and you have lost 100 rpm. Adjust the throttle, tighten the friction, and re-trim. A few minutes later you need to do it again and your indicated airspeed is down a bit.

Okay, now ice is really starting to bite. It depends on the pilot how long it takes for the penny to drop before she realises the problem is not the throttle friction: it's ice.

But that's in calm air. If there's turbulence it can take a lot of re-trimming and power increases before you wake up.

And we have only half answered the question that I asked: what are the first two indications you will get of icing?

One of them is the need to re-trim. The other is a lot more obvious. Surprisingly, nearly all aircraft have a gauge that tells you when you are getting ice. It's not meant to tell you that, but it does so very effectively. Can you think which gauge this is?

It's the EGT.

As soon as ice starts developing, it restricts the airflow through the venturi. This richens the mixture and causes a very noticeable drop in EGT.

Now you can show her what power changes do to the aircraft, aerodynamically. And you can use the terms increase power, or decrease power, without reminding her to use the mixture and carby-heat intelligently each time

Thrust

What is thrust? It's the forward 'pull' of the prop, and it acts through the centre of thrust, which (on most aircraft) is below the centre of drag. Boring.

Why does she need to know this? Because it causes the aircraft to pitch about its lateral axis, like the elevator. Still pretty boring. And this means that every time she moves the throttle, she will have to make an elevator or trim change.

We are starting to get her attention. So if her aeroplane is say out of C of G (or perhaps badly designed) then thrust changes could be lethal. Okay now you have grabbed her attention.

How does it work? Well, this is where you spread yourself wide and give her the whole nine yards about the thrust/drag couple, and how this is designed to save her from running out of airspeed when she reduces power. I have only flown one aircraft that didn't do that: the Lakes Buccaneer. Its high thrust line feels uncomfortable and dangerous. Even pilots experienced on type can get it wrong in turbulence on final approach, with disastrous results.

Your demo will be from hands-off trimmed straight and level. Note altitude, VSI and airspeed. Smoothly go to full power, using enough rudder to keep the wings level. Note how the nose pitches into a climb and the airspeed decreases.

Obviously the opposite happens with a power reduction.

Not all aircraft behave the same. Try in the training aircraft so you know what to expect before getting it wrong in front of your pupe.

Slipstream

Explain what it is with diagrams. Then take her for a walk round the flight line and look at the left rear fuselage and tail fin of different aircraft. Notice anything? Bug splatter, grass stains and stone chips, which indicate that the prop's slipstream beats against the left side of the rear fuselage and tail, and tries to turn the aircraft left.

On many aircraft, if you stand behind the tail fin, you will see that it is offset against the fuselage to help counteract this effect. And if you look at an aircraft with the nose cowl off you will see that the engine is also offset slightly for the same reason.

Why she needs to understand this is because it is one of the main reasons that the aircraft is fitted with a rudder at all. It's to counteract this 'P' effect of power. It varies enormously at different airspeeds and power settings.

It really comes into play during go-arounds. At very low airspeed and full power you may need to use almost full right rudder to keep straight. Ever noticed how nearly all go-around accidents are to the left of the runway? Pilots not using enough right rudder with power.

Demo it by getting her to put her hands and feet on the controls while you keep the aircraft pointing towards a distant point, with rudder only. Now fly it through its speed range, going from max speed with no power, to minimum speed with max power. Don't overdo this as the aircraft may flick into an incipient spin and upset her. Plenty of time for that later in her training.

> « Here's a question: you are flying straight and level on a silky smooth day, and you have everything trimmed hands off. What are the first two indications of carby-icing? »

Gyroscopic

Give her a full briefing, using a model aircraft (with a propeller).

Why it's important: well, on a nose-wheel aircraft it's not really important, it simply causes a slight twitch to the left if you rotate sharply during take-off, which you shouldn't.

On a tailwheel aircraft gyroscope effect will dominate your life during take-off.

How? Get into the full guts of gyroscopes and how the prop is a massive gyroscope, which has greater or lesser effects depending on revs.

Gyroscopic effect is most noticeable when you pitch the nose up or down at high rpm and low airspeed. Again practice on your own before showing it to your pupe.

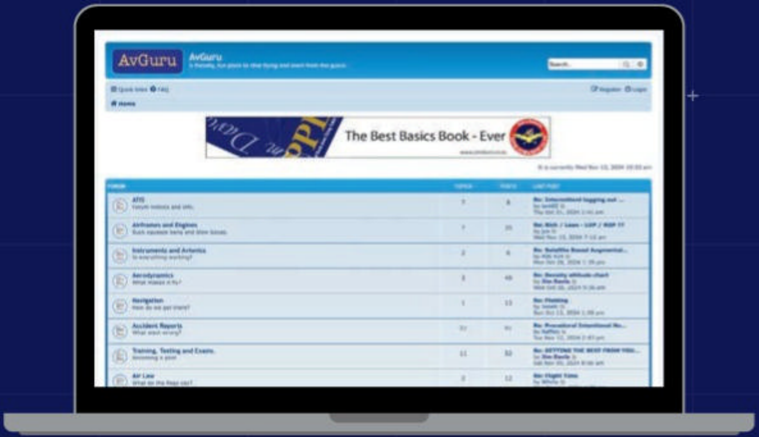
Torque

It's simply the reaction of the airframe to the propellor's rotation. Prop turning clockwise, aircraft rolls anticlock.

Why it's important: actually for a PPL, flying a tricycle family aeroplane, it's not important. In a dedicated aerobatic aeroplane it is almost the foundation of flight.

Taking off in a taildragger with a clockwise prop at full power the left wheel has more rolling resistance, particularly with small wheels on a grass runway, so it tends to cause a left turn. You automatically counteract with right rudder.

A demo is not necessary.



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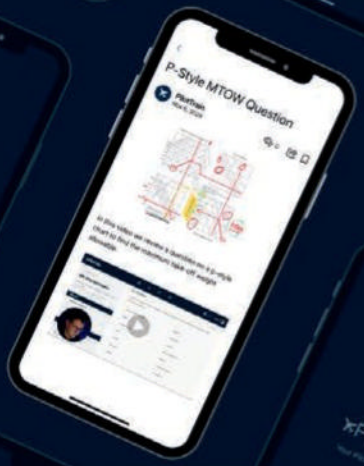

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The Bell 407GXi: Precision, Power, Performance

For a single-engine light utility helicopter, the Bell 407GXi delivers enormous bang for the buck. **Benn Marks** explores.

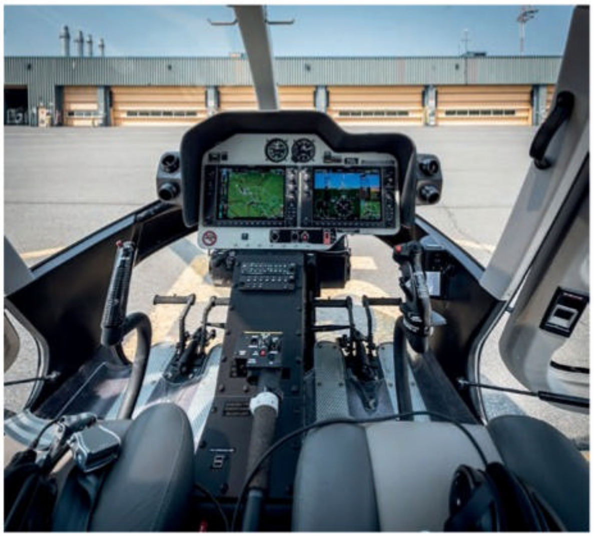
Not only is the machine, with its four-bladed, hingeless, main rotor system, beautiful looking but it's also powerful, manoeuvrable and incredibly versatile.

Able to throw its hat in the ring for a whole swag of applications, ranging from public safety, such as firefighting and police ops, to SAR and HEMS (helicopter emergency medical service), to utility, corporate / VIP, tourism, armed multi-role and training tasks, there's not really much the lovely looking helo can't do.

Basically, regardless of the op it's tasked with, the Bell 407GXi conveys the impression of being, and handling, like a high-performance sports car, with all the modern trappings and practicality of a top-end SUV.

According to Bell, the Bell 407 is "the most advanced light single multi-mission helicopter in service". And the latest version of the advanced helo, the Bell 407GXi, is packed to the rafters with incredibly impressive systems, from its hi-tech avionics to its powerful turboshaft engine and all-composite four-blade rotors, which are neatly bundled in a functional design providing heaps of versatility combined with top-notch performance.

Interestingly, Bell's claim is hard to refute considering that the Bell 407, and its subsequent iterations, including the latest Bell 407GXi, is a derivative of the OEM's legendary and commercially very successful Bell 206L LongRanger, itself "a stretched development" of the iconic, high selling and hugely



> **“In essence, we’re talking about a lovely marriage between trusted older systems and newer advanced ones”**

MAIN: The Bell 407GXi looks like a more modern, powerful and "buffed" version of the classic Bell 206L LongRanger

ABOVE: The single-pilot capable machine is equipped with a Garmin G1000H NXi Integrated Avionics System

popular Bell 206 JetRanger.

The point being that the Bell 407’s predecessors were highly capable platforms in their own right, incredibly versatile, reliable and adaptable, so it’s fair to say that there’s a solid foundation underpinning its design. Furthermore, while the winning trifecta of versatility, reliability and adaptability appear to be repetitive themes with Bell’s catalogue of impressive, rotary-wing designs, the simple fact of the matter is, they are.

And just like its predecessors, the Bell 407 has been commercially very successful as well. Since the helicopter’s introduction into service in 1996, a figure in the order of about 1,800 of the machines have been built, with examples of them gracing the skies of many major cities, and further afield, of innumerable countries in both the northern and southern hemispheres, performing a multitude of roles. A further breakdown of the type’s production numbers will reveal that, in Oceania, there are over 20 Bell 407s in Australia, while Papua New Guinea is home to approximately 25 of the machines, with approximately 130 in North Asia. These numbers include the different versions of the helicopter too, encompassing the Bell 407, 407GX, 407GXP and 407GXi. Impressively, the machine has clocked up around 7.5 million global fleet flight hours since its introduction.

So it’s fair to say the Bell 407 packs a punch, with the latest version of the lovely machine, the impressive Bell 407GXi, doing an outstanding job of carrying the torch for Bell in the single-engine, light utility helicopter space today.

In that regard, the machine’s a king hitter in its class, and a quick review of some of its key design features, systems and performance specs will illustrate why.

According to Bell, the helo’s aforementioned four-bladed, hingeless, main rotor system with its composite hub was developed to provide it with high degrees of manoeuvrability and stability, rendering it arguably superior to many in its class; while its drive train was derived from the popular and legendary Bell OH-58D Kiowa Warrior helicopter operated by the U.S. Army. In essence, we’re talking about a lovely marriage between trusted older systems and newer advanced ones, which work very well in the Bell 407GXi.

The well-respected OEM has also pointed out that the Bell 407GXi’s “control margins,” coupled with its main rotor system provide pilots with solid and predictable responses during all phases of flight; characteristics that also make the helicopter ideal for ops which involve “long hovering duration, low altitude flights, and obstacle avoidance such as trees, electrical wires and towers”.

Speaking of characteristics, in terms of appearance, the Bell 407GXi looks like a more modern, powerful and “buffed” version of the classic Bell 206L LongRanger from which it’s derived. But perhaps for those seeking a more visually discernible point of difference between the two, it’s the Bell 407GXi’s previously mentioned four-bladed, main rotor assembly that clearly distinguishes it from the Bell 206L LongRanger’s two-bladed, main semi-rigid rotor system. (Both machines however still possess a two-bladed tail rotor.)

But rotor systems aside, being more or less slap-bang in the middle of the single-engine light utility helicopter category, the Bell 407GXi’s dimensions seem to be just right for a machine that can comfortably seat seven people; that is, one pilot plus six pax (or one passenger sitting upfront next to the pilot, plus five seated in the main pax cabin in a club seating arrangement). The helo’s main cabin provides 85 ft^3 of space for them to sit comfortably in. It also comes equipped with the widest cabin door in its class. There is also a 16 ft^3 aft baggage compartment, providing additional storage space. In a HEMS capacity, patients can be loaded into the Bell 407GXi’s main cabin through the helo’s incredibly functional bi-fold doors, which significantly create a larger opening for the loading and unloading of critical care patients.

All up, the Bell 407GXi can carry a useful internal load of well over a ton, with the maximum load hitting the scales at 1,156kg,

The machine comes equipped with HTAWS (HELICOPTER TERRAIN AWARENESS AND WARNING SYSTEM) AND TCAS (TRAFFIC COLLISION AVOIDANCE SYSTEM)

Specifications

SPEEDS AT MAX GROSS WEIGHT:	
VNE	140 kts 259 km/h
Max Cruise	133 kts 246 km/h
Range at VLRC1	337 nm 624 km
Max Endurance	1 4.0 hrs
CAPACITIES:	
Standard Seating	1 + 6
Maximum Seating	1 + 6
Standard Fuel	127.8 US gal 483.8 liters
Aux Fuel	19 US gal 71.9 liters
Cabin Volume	2 85 ft3 2.4 m^3
Baggage Compartments Volume	16 ft3 0.5 m^3
WEIGHTS:	
Empty Weight (Base 407GXi Aircraft)	2,700 lbs 1,224 kg
Max Gross Weight (Internal, Standard)	5,000 lbs 2,268 kg
Max Gross Weight (Internal, Optional)	5,250 lbs 2,381 kg
Max Gross Weight (External Load)	6,000 lbs 2,722 kg
Useful Load (Internal, Standard, Base 407GXi Aircraft)	2,300 lbs 1,043 kg
Useful Load (Internal, Optional, Base 407GXi Aircraft)	2,550 lbs 1,156 kg
Cargo Hook Capacity	3,100 lbs 1,406 kg
POWERPLANT	
Rolls-Royce M250-C47E/ 4 dual-channel	FADEC turbine engine
AVIONICS	
Garmin G1000H®	NXi Integrated Avionics System

1 Std Max GW, ISA, Std. fuel - no reserve, at sea level

2 Does not include copilot volume of 20ft^3 /0.6m^3

which is impressive. The empty weight of the machine (the base Bell 407GXi helo) will move the needle on the scales up to 1,224 kg, so it's relatively light but certainly no pushover. Speaking of which, when the load's carried internally, the Bell 407GXi can take-off with a maximum gross weight of 2,381kg. Yet, when the load's carried externally, the helicopter can take-off with a maximum gross weight pushing the needle even further around the dial to a more impressive 2,722kg, which is not far from the three ton mark. The Bell 407GXi's cargo hook capacity is 1,406kg, lending itself beautifully to a range of practical applications.

In order to overcome the forces of gravity, however, and do the heavy lifting that it does with relative ease, the Bell beauty is blessed with an abundance of power in the form of a highly reliable, fuel-efficient Rolls-Royce Model 250-C47E/4 turboshaft engine that offers "hot and high" performance and comes with dual, digital FADEC (Full Authority Digital Engine Control) that automatically adjusts engine power. The powerplant is capable of producing 862shp for take-off, while delivering a max continuous output of 761shp for cruise.

While for those inquiring about the helo's performance, Bell has certainly not shirked from its responsibility in designing a machine that ticks all the right boxes for its Bell 407GXi customer base. On a nice, standard flying day, the attractive looking rotary-wing design can fly along at a maximum cruise speed of 133 kts (it's VNE being 140 kts), and cover a distance of 337nm, enabling some lovely sightseeing along the way. Speaking of sightseeing, the Bell 407GXi's cockpit windshield and cabin doors are specced out with some impressively sized glazing, affording excellent views for those aboard looking out, making it ideal for tourism ops.

Basically, the helicopter is capable of a four hour flight time, which is a good, solid number.

While upfront, the single-pilot capable machine is equipped with a Garmin G1000H NXi Integrated Avionics System that makes flying the Bell 407GXi very user-friendly, intuitive and just downright good fun. Some of the highly advanced system's key features include two large twin 10.4 in (26.4 cm) flat panel high definition LCDs, which include Synthetic Vision System (SVS) that can interchangeably serve as Primary Flight Display (PFD) or Multi-Function displays (MFDs), providing all critical flight, systems, nav and comms information to pilots in high-res detail. The machine also comes equipped with HTAWS (Helicopter Terrain Awareness and Warning System) and TCAS (Traffic Collision Avoidance System); again, providing pilots with additional layers of safety when flying it.

Basically, the helicopter is capable of a four hour flight time, which is a good, solid number

Furthermore, for operators wanting to go above and beyond with their Bell 407GXi's taskings, the single-engine aircraft can be certified for single-pilot IFR (instrument flight rules) ops, too. (The Bell 407GXi receiving its STC (Supplemental type certificate) certification from the FAA in August 2019 for a Single Pilot IFR Kit; a worthy addition for operators using their Bell 407GXs in a HEMS or SAR capacity.

Simply put, for a helicopter in the single-engine, light utility space, the Bell 407GXi is a class leader. If a helicopter owner is seriously contemplating acquiring a rotary-wing aircraft in the category, then it's fair to say the Bell 407GXi should be at the top of their shopping list.

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Rotors

Lift-off for new LifeFlight helicopter

The first of seven new AW139 helicopters for LifeFlight's growing fleet touched down in Toowoomba in late December as the aeromedical organisation expands to meet soaring demand.

LifeFlight's rotary wing aircraft operate across Australia, with nine servicing Queensland

Its arrival heralds a new era of aeromedical capability for LifeFlight, which boasts one of the largest fleets of the rescue helicopter in Australia.

The new AW139 will be dedicated to the Queensland Health services contract, supporting an eight-strong fleet of AW139s across five fully-funded LifeFlight bases in Toowoomba, Brisbane, Sunshine Coast, Bundaberg and Mt Isa.

In 2023 the State Government committed to a $1.25 billion funding agreement over 10 years for LifeFlight's Queensland helicopter operations, providing certainty that vital search, rescue and aeromedical services would continue.

The aircraft was manufactured by Italian-based Leonardo and transported to the LifeFlight Clive Berghofer Maintenance Centre where it was assembled by LifeFlight's engineering team.

It is the most advanced aeromedical rescue helicopter in the world, with a maximum cruise speed of 305 kph and a range of 895km.

The helicopters are perfectly suited to search and rescue missions in Australia, whether out to sea, in the outback or winching in mountainous terrain.

LifeFlight chief executive officer Ashley van de Velde OAM, said LifeFlight's investment in an enhanced fleet ensured the organisation continued to evolve.

"Our challenge is to future-proof our service at a time of strong population growth and increasing demand from Queensland Health to meet even higher standards of service to the community, bringing additional pressure on our fleet," Mr van de Velde said.

"AW139s can travel further and faster which is critical to continuing to deliver the high standard of service and care that Queenslanders have come to expect from LifeFlight."

LifeFlight head of flight operations, Jeremy Ovens, said the new AW139s provided a boost to LifeFlight's capability at a time when the organisation was helping a record number of people.

"In FY24 we helped more than 8000 people, 11 per cent higher than the previous year, so having these helicopters means we can respond more efficiently when and where we are needed," Mr Ovens said.

"I launched the AW139 simulator at LifeFlight and trained pilots to use the aircraft, and we know how capable it is particularly with winch rescues or search and rescue operations."

The new AW139 will be trialled in Toowoomba before operating out of the Sunshine Coast. It features new branding decals and indigenous art, reflective of

McDermott Aviation assists in National Fire Ant Eradication Program

RIGHT: McDermott Aviation has been conducting aerial spray operations throughout various parts of affected Queensland

Heavy lift helicopter specialist, McDermott Aviation, recently announced it had successfully aerially sprayed more than 145,000 hectares in Wacol and surrounding areas near Brisbane in Queensland, as a part of this season's National Fire Ant Eradication Program.

The helicopter company, which operates a diverse fleet of rotary-wing aircraft, including the Bell 214B, Bell 214ST and AS365 Dauphin, deployed its Bell 47T, Bell 206L LongRanger and AS355 Twin Squirrel machines to assist in spraying the affected areas. A McDermott Aviation

LifeFlight's commitment to its reconciliation action-plan journey.

The Darling Downs was chosen for the trial due to the high workload undertaken by the two existing AW139 helicopters in the region.

This will enable the new helicopter to be put through its paces while simultaneously taking pressure off the existing fleet.

Toowoomba is LifeFlight's busiest base helping 871 people so far this year including 112 people in motor vehicle accidents and 27 people injured by animals.

Apart from the Sunshine Coast, the first intake of AW139s is bound for Bundaberg and Mount Isa, enhancing LifeFlight's capability throughout the emergency helicopter network and bolstering support for short-term deployments.

LifeFlight's rotary wing aircraft operate across Australia, with nine servicing Queensland (based in Brisbane, Toowoomba/Roma, Sunshine Coast, Bundaberg and Mount Isa) and operating 24 hours a day, 365 days a year.

In Queensland the aircraft directly service an area of 1.85 million square kilometres and support search and rescue efforts across 53 million square kilometres of land and sea for the Australian Maritime Safety Authority.

company spokesperson said the company commenced aerial spray operations over Wacol and surrounding areas at the beginning of the season last September, with their involvement in the program expected to conclude at the end of it in May this year. McDermott Aviation has been conducting aerial spray operations throughout various parts of affected Queensland since the national program commenced in 2001.

Nautilus Aviation long-term pilots complete Bell 429 type rating

Nautilus Aviation recently announced that three of the company's long-term pilots, Gregg Kubernat, Glen Colledge and Matt Schostakowski, had completed their type ratings on the light, twin-engine Bell 429 multipurpose utility helicopter. Nautilus Aviation, which operates a large and modern fleet consisting of Bell 206 JetRanger, Bell 206L LongRanger, Bell 407 GXi, Airbus H125, Airbus H130, Robinson 44 and Bell 412 EP aircraft, offers a range of commercial, emergency and charter helicopter services across Northern Australia for clients in the government, mining and resources, and media sectors. This latest development bodes well for the company, which is looking to add a Bell 429 to its fleet shortly, further bolstering its capabilities in the search and rescue, mining, marine pilot transfers and emergency response sectors across the regions it serves.

LEFT: Nautilus Aviation operates a large and modern fleet

Loss of control and collision with terrain involving Aérospatiale (Airbus Helicopters)

On 22 November 2024, at about 0828 local time, an Aérospatiale (Airbus Helicopters) AS332L1 Super Puma helicopter, registered N368EV, departed Broken Hill Airport, New South Wales for Albury with one pilot and a passenger on board. The flight was the final leg of a repositioning flight from Kuala Lumpur, Malaysia that started on 17 November 2024. The helicopter was being positioned at Albury for use as an aerial firefighting asset over the summer period.

At about 0955, while cruising at about 3,500 ft above mean sea level, the pilot noted a high frequency vibration through the airframe that was also apparent to the passenger. In response, the pilot lowered the collective control and began a descent, noting that Hay aerodrome was about 22 NM (41 km) from their location. Recorded data showed the helicopter descended at about 1,500 ft/min with an indicated airspeed of about 115 kt.

In interview with the ATSB, the pilot reported that, during the descent, they heard a loud thud, which was immediately followed by an uncommanded yaw to the left. To control the yaw, the pilot established an autorotation then indicated that they reduced the throttles to idle, however, inadvertently reduced the no 2 engine throttle beyond the idle gate position resulting in the engine shutting down.

> « the pilot initiated a straight-in approach towards the open fields below »

With the reduction in power, the uncommanded yaw ceased, and the pilot initiated a straight-in approach towards the open fields below. On approaching the ground, the pilot reported that, during the final flare with reduced airspeed, application of the collective control to cushion the landing resulted in the helicopter yawing again.

At about 0958, the helicopter landed heavily, initially impacting terrain in an upright attitude but facing in the opposite direction of flight, before rolling onto its right side. The emergency locator transmitter was activated in the impact and there was no post-impact fire. The pilot and passenger survived the impact but were seriously injured. The passenger, who was seated in the forward cabin, succumbed to their injuries. The helicopter was destroyed.

ROB WALKER

As the CEO of the RAAA, Rob Walker is an advocate for voice of regional Australian businesses. He is well known across the industry for his government experience with Airservices Australia and CASA.

Send them a message

Regional Aviation Association of Australia CEO ***Rob Walker*** *urges us to think aviation when we vote.*

A challenge of writing for a magazine like Australian Flying is the gap between delivering a column and seeing it in print. It takes time to edit, layout, print and distribute a quality magazine.

So, part of the art of producing a column is looking ahead and anticipating what is relevant when readers are sitting back and perusing the latest edition.

As you read this edition, the 2025 federal election campaign should be underway or close to starting. But there is a possibility the election date has passed or the day is upon you.

If I'm late with my commentary on the election and aviation issues I apologise, although I think the issues are still well worth considering and I very much hope you read on.

Free and fair elections across the world are not in fact that common. According to an academic study the global level of democracy in 2023 was back to that in 1985 – before the collapse of the Soviet Union.

It means we are lucky in Australia to have a chance to have our say in a meaningful way at the ballot box. It also means we each have a responsibility to take the democratic process seriously and to cast our vote with appropriate thought.

If you're part of the aviation community, which I'm almost certain you are as you're reading Australian Flying, then I urge you to have a think about issues relevant to our sector and the attitude of the political parties and candidates to these issues.

I know that in a federal election big issues such as the economy, health and education will be dominant, but it doesn't mean aviation should be ignored. In fact, aviation has a key role in enabling national and regional economies and in assisting in the delivery of services like health and education to regional and remote communities.

A threshold question for political candidates should be does your party or grouping have a detailed, well thought-out aviation policy? And if not, why not?

If policies are available then everyone in aviation should have a look at them and consider if they address relevant issues, offer solutions to current problems and pass a commonsense test.

Of course, political parties and candidates don't operate in a vacuum as they respond to events, social changes, community values and pressure from community sectors and interest groups.

In other words, they will respond to the aviation community if we speak up, cogently argue our positions and offer solutions to problems. There is a responsibility on all of us from right across Australian aviation to be a part of the political process if we want the best outcomes for our sector.

At an individual level that means thinking about what parties and candidates have to say about aviation and using our votes wisely. Collectively, we must contribute to the political process by engaging on issues, developing and lobbying for policy solutions and complaining loudly if promises are not delivered.

RAAA election policies

Engaging on issues and developing policy solutions are key functions of the Regional Aviation Association of Australia (RAAA) and we continually work hard at making sure we are part of the political process at all levels.

Even though it should be obvious,

we never stop pointing out to politicians, their staff and public servants how critical aviation is to regional and remote Australia and the commercial risks and challenges of providing these many services.

For regional aviation businesses profit margins are thin and return on investment is hard earned.

In the lead up to the 2025 federal election we identified seven key policy areas that political parties and candidates must address to ensure the health and viability of regional aviation.

These are:

- Targeted and additional government support for regional operators who face ever increasing costs while needing to keep fares as low as possible
- Ongoing skill shortages, particularly pilots and licensed aircraft maintenance engineers
- A need to continue to work on improving regulations such as flight training and to make sure government aviation agencies are efficient and provide timely services
- The challenges of the future including sustainable aviation fuels and emerging technologies such as hydrogen electric power plants
- Ensuring Automatic Dependent Surveillance – Broadcast (ADS-B) technology is fitted to as many aircraft as possible as quickly as possible
- Recognition that regional aviation has many differences to large operators and one-size-fits-all policies and legislative requirements will jeopardise services
- Industrial relations legislation that requires regional operations to match large operators in areas such renumeration.

One issue looming for many regional operators is the challenge of fleet renewal, with the very large costs that entails.

As many people would know like-for-like replacement aircraft are often simply not available, forcing the need to purchase very expensive new aircraft or spend ever increasing amounts on refurbishing existing aircraft.

RAAA is calling on political parties and candidates to commit to working with us to develop a scheme to support regional operators meet these large capital costs. A model that can be used is commonly applied in the mining sector, where companies are offered government loans or loan guarantees. This reduces the cost burden of the capital investment and allows funds to be committed to new projects earlier.

There are examples overseas of governments providing this type of investment support for aviation operators to purchase new aircraft as it is rightly seen as a cost-effective way to safeguard a sector that serves the national interest.

We are also pushing to make sure politicians understand the policies that apply to large airlines in many cases simply can't work in the regional sector. Policies such as the Aviation Ombuds Scheme, aimed at giving passengers additional customer rights, need to be carefully developed to take into account logical operational differences in the regional sector, such as the size of aircraft and operating resources.

Additional and unfair burdens on the regional sector will inevitably send some operators to the wall.

At election time, it's time to send the pollies a message: think aviation if you want a vibrant future for the whole nation.

RAAA
REGIONAL AVIATION ASSOCIATION OF AUSTRALIA

Come and see us at the
Avalon Australian International Airshow 2025

Serving regional aviation, and through it, the people and businesses of regional Australia

Join us on Thursday 27 March at 10.00am at the Airshow Conference Centre Room 5 for a special RAAA session – "RAAA Into the Future'.

Meet our Board and CEO and hear about our plans for the Association (entry is open to all trade registrations).

Visit us at
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Pod 19

For more information
RAAA - www.raaa.com.au
Airshow - www.airshow.com.au

Fix our Exams!

Carl Brewer outlines the importance of adding EFB training to the exam syllabus.

EFBs have been with us now for more than a decade. They're amazing, capable, and they do all "the stuff" for you.

They have, in a space of a few years, rendered most flight planning techniques taught in RPL, RPC, RA-XC, PPL and CPL pretty much totally obsolete. This is critical to understand. If you're flying around these days, you're not using paper maps and charts. You're not calculating how much daylight there'll be at 40 05.483S 147 59.567E on the 5th of October in UTC or local time, or ESST, you're not breaking out the whizz wheel and doing ground speed calculations, you're not punching numbers into complex paper spreadsheets to work out fuel, reserve fuel, fixed reserve fuel, endurance etc. You're not drawing pencil lines on a weight and balance chart to work out how much baggage you can carry in your Archer III, you're not grovelling through the GPWT chart to work out what the forecast wind will be at 2,000' at YLTV. You're not punching all your flight plans into that astonishingly and disgustingly opaque NAIPS website and hoping it'll not reject your plan for *mumble* reasons. You're not groveling through the VFRG trying to remember what some obscure two letter code in a TAF means.

You're not, because your EFB is doing it all for you. It takes, once the thing is set up properly, about 5 minutes to do all this, print it out and off you go.

So guess what we test in our exams?

All that "stuff".

You're doing that stuff ONCE per flight test or exam, and NEVER AGAIN.

Guess what we DON'T test? How to use an EFB.

It's not in the syllabus. It's not in the exams. It's not tested. It's not even taught! EFB help-desk staff spend hours every day with pilots who are confused about how to use the EFBs and who can't or won't read the manuals (RTFM!).

Important things pilots must know

Pilots MUST understand

- Weather forecasts
- Weather observations
- Daylight
- Visibility (VMC/IMC)
- Weight and Balance
- Fuel Planning

These things apply to all pilots, regardless of if they've completed an RPC or an RPL.

Additionally, for cross country flight;

- Navigation
- More detail on weather
- More fuel planning

There's others, of course, but these things are key. I'm not talking about aerodynamics or how a turbocharger differs from a supercharger, or how one obsolete gyroscopic instrument differs from another. That we can discuss later, when we talk about the great spin/no spin training issue. That'll never go away! But for now, let's look at the CASA and RA-Aus exams and are they relevant to the modern pilot.

Our flight planning training syllabus is manifestly unfit for purpose.

What are we saying to pilots? Pass all this obsolete stuff, and then off you go. The modern pilot looks at this with horror. The RPL(A) exam still has a pass rate of about 54%. You read that right. Just under half the times that exam is sat, it is failed[1]. It is examining stuff that modern pilots simply don't need to do.

Show a weight and balance chart to a 16 year old who's been using digital devices all their lives, and they look at you with a mixture of bewilderment and some other stuff that won't get past my editor. Paper maps? What are these things?! There's no Melways in the car anymore, it's gone, "the kids" don't even know what a street directory is. Surely you can get this done electronically? Wouldn't it be a lot less error prone? This is STUPID. The difference between killing yourself and flying in the envelope should not be the sharpness of a pencil and your ability to draw a horizontal line on a 5th generation photocopy of a chart from a 35 year old flight manual.

Taking a step back from the sheltered workshop of flight training, you have to gasp at the absurdity of the situation.

Alright, so what can we do?

Well, for starters, we can allow EFB's in exams.

EFBs have been with us now for more than a decade

Oh NO! UNFAIR! "PERCEPTION OF UNFAIR! [2]".

Allow the things. Allow the regs to be in them. Everyone has access to them, and the software and licences are cheaper than buying all the charts and legal paper anyway [3]. Just accept reality and do it. If you want to prevent cheating, make sure that they're offline. The PEXO supervisors can stop reading books on your dime, and patrol the exam room to make sure that our exam candidates haven't gone on-line and started asking ChatGPT what a spin is. Or provide the devices with no access to wifi. There's desktop PCs and UPS's in the exam rooms, nothing stops you getting some iPads as well. Even if it adds $50 to the exam fee, it will save a fortune for candidates not having to buy a dozen charts that they won't even use IN THE EXAM [4]. Candidates can nominate which EFB they want to use before the exam. I am certain the EFB companies will co-operate whole-heartedly.

Provide Alpha, Bravo, Charlie and Echo models for the EFBs (easy to do) so that everyone has access to the same information about them. It's not hard. I am certain that the Australian EFB developers will be only too happy to help, if they haven't already. It's all in the workbook anyway, it's easy to add into an EFB, it's probably already been done.

But shouldn't we know how to do this if it all goes to hell in a hand basket and your EFB fails?

Of course. We need to TEST that pilots know what can, and does, go wrong. Bad data inputs, bad models, overheating, dropping the thing, leaving it on the roof of the plane, flat batteries, forgetting to update the charts and data, hardware failure, losing GNSS sync etc. These things go wrong. We don't test pilots on how they deal with these things.

We should also test that pilots understand the underlying stuff. The need to know what a GPWT chart is, how to create or confirm that it's ok, an aircraft model for weight and balance. To understand how daylight works around the globe, in principle. But not in such a way that if you transcribe the wrong number from the low resolution chart in the VFRG for daylight because you used an HB instead of a 2B, it costs you the pass. Or you haven't done 20 examples of a Bravo with baggage and two people that want to sit in the back seats and can't remember the details of how to do it under exam pressure. Because you WON'T EVER DO THIS FOR REAL.

> **"Our flight planning training syllabus is manifestly unfit for purpose."**

Assuming we can kick ourselves out of the 1980's, we can also include the EFB in flight tests. If you're doing a flight test in anything modern, it has PFD displays with GNSS, fuel, etc all in it anyway. You can "fail" the EFB during the test (that's when you find out how to use your backup EFB). It's perfectly legal to fly commerciall charter with two EFBs. Why isn't it ok to rely on them in a flight test? You can use them in a flight review. I guess you just worked out how to use them on your own in the mean time?

We need to be testing competency in the use of these things, not ignoring them to keep some retro-grouch happy. What're we going to do when Air Services stops publishing paper altogether? It's coming, we should be on the front foot.

[1] *https://www.casa.gov.au/licences-and-certificates/pilots/pilot-and-flight-crew-exams/pilot-exams/recreational-pilot-licence-aeroplane-exam-rpla - and there's no stats for RA-Aus exams, you'll just have to guess. They don't provide crayons.*

[2] *You know who you are, I'm not naming you… But you know.*

[3] *See IREX, really? A FULL set of DAPs?! This is absurd.*

[4] *See IREX, again. Really! All those charts, and you might use 2 of them.*

Everyone wins by working together

Consultation is a key part of our regulatory and policy-setting processes and we take on board the feedback you give us, says **Pip Spence.**

While it won't always alter our overall direction, we know we don't have a monopoly on good ideas and your views result in changes more often than people think they do.

This applies even after we've started down a particular path – as our recent airspace review of Western Australia's Pilbara demonstrates.

The Pilbara is a fascinating and dynamic area that generates billions of export dollars and has no shortage of spectacular scenery.

Once considered a remote and difficult-to-access region, a proliferation of iron ore mines and the growth of fly-in, fly-out (FIFO) operations means it is now a busy air transport hub.

Just how busy is demonstrated by an analysis of available data from 11 certified aerodromes within 100 nautical miles of Coondewanna Airport.

Between 2016 and 2022, total aircraft movements increased 33.3% from 24,624 to 32,821 and passenger movements increased 38.5% from about 1.37 million to almost 1.9 million.

Adding to this is agricultural aviation and a growing tourism industry as people discover the area's scenic attractions.

Growth brings added complexity and this was why we embarked on an airspace review to see whether the current airspace classifications in the Pilbara were appropriate.

Our assessment was that the airspace architecture, classifications and services provided were appropriate for all airspace users.

But we continued to engage with the aviation community and that allowed us to identify issues not raised in the initial review.

These related to cockpit workload, a lack of VHF communication, the number of aircraft landing areas in the region and issues with situational awareness.

Based on our extensive engagement with local operators, we identified several actions to enhance operations in the region. Some of them, such as engaging Airservices Australia to develop a new terminal area chart, have already been implemented.

We also supported the establishment of a Pilbara Operators Safety Forum with representatives from airlines, Airservices, aerodromes, resource companies and service providers.

The aim was to provide a forum in which the parties could engage with each other and explore common issues and opportunities to improve aviation safety in the region.

Opportunities included encouraging operators to provide CASA with information about potential risks that would not otherwise be reported, supporting an analysis by Airservices of VHF and ADS-B coverage in the Pilbara and proposing the publication of a new terminal area chart for the region.

Other options that may be considered by operators in the region include the establishment of standard instrument arrival and departure routes, improved schedule coordination and CASA will seek to engage land use agencies in relation to closely spaced aerodromes.

We're also assessing the adequacy of flight information services and the impact on a pilot's situational awareness, including an analysis of pilot cognitive workload at six aerodromes.

This has been a good lesson in how moving beyond a straight analysis and continuing to engage with the aviation community can reap benefits. It also demonstrated that CASA can play an important facilitation awareness raising role, rather just mandating a solution.

Everyone wins by working together for improved safety and we've been listening to your feedback in areas as diverse as emerging technology, surveillance and the transition to our new flight rules.

The extension of the flight rules transition timetable was another good example of how information you provide can prompt us to make changes after a project is underway.

We had already planned for a staged transition but we extended the timeframe to 5 years when it became clear in 2023 that everyone needed more time to introduce these changes.

We welcome your feedback not just through consultation processes but from other sources such as the Aviation Safety Advisory Panel and its technical working groups.

Of course, reaching a consensus in our community is not always easy because of the passionate and diverse views of various participants. But I believe considering the feedback is worth the effort and it's an approach we will continue to embrace as we move through 2025.

All the best, Pip

P2006T NG SPORT

The new **TECNAM P2006T NG (Next Generation)** is the result of more than 300 improvements over the current P2006T MkII, achieving better flight safety and efficiency. Main features include two fuel-injected **Rotax 912iSc3** engines, greater accessibility via **two enlarged front doors with expanded side windows and external access to the luggage compartment**.

The new centre console design offers an intuitive interface for pilots with a total connection between an EFB tablet and the **G1000 NXi cockpit** with the innovative **Garmin Flight Stream** avionics system. The **GFC 700 autopilot** ensures a more comfortable and precise management of the aircraft, transforming your every journey into an experience of pure freedom and relaxation. These features make the P2006T NG **the perfect twin-engine aircraft for your training fleet.**

The **SPORT** version features an indulgent all-Italian design, providing pure luxury during every flight. From **the dashboard covered in black leather with soft LED lights, to the carbon-look panels, control yokes and leather-clad center console**, every detail has been meticulously handcrafted for **the ultimate pilot experience**.

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Stable Growth Pattern Continues into 2025

*With 2025 well underway, the forecast for the business aviation sector worldwide remains gently optimistic. **Jessica Graham** reports.*

The magnificent Bombardier Global 7500

IMAGE: BOMBARDIER

Published late last year, the 2024 Honeywell Global Business Aviation Outlook forecasted a 12% increase in new business jet deliveries for 2025 compared to the previous twelve months and noted expenditures are expected to be 11% higher.

According to Honeywell, "Some 8,500 new business jets valued at $280 billion will roll off aircraft manufacturers' assembly lines in the next decade, including models that will be safer, more efficient and more sustainable than ever."

The report projects that large jets are expected to account for two-thirds of new business jet purchases through 2030. This trend has been observed in Australia in recent years, where late-model, long-range, high-performance jets such as Bombardier's Global 7500 and Gulfstream's G700 have found favour with established owners and new entrants alike. Manufacturers are set to capitalise further on this trend with the future release of the Global 8000, on track for certification this year, and latterly, Dassault Falcon's 10X.

More and more, purchasers are driven to consider performance and total cost of ownership, not just initial outlay, as driving factors when acquiring a new aircraft. This trend will continue to accelerate the transition away from legacy technologies as manufacturers heed the call for improved, data-driven systems that maximise performance, boost safety and efficiency, reduce operating costs and assist operators in tracking their environmental footprint.

Business Aviation at the Shows

Emerging technologies and sustainability initiatives will undoubtedly be at the forefront of this year's key business aviation industry events.

First up, and first of its kind, the Business Aviation Asia Forum & Expo (BAAFEx) 2025 will be held in Singapore from 4 – 6 March 2025. In its inaugural year, the forum is currently the only Asian event dedicated to business and general aviation. It will be hosted at the Changi Exhibition Centre and is planned to be held in alternate years to the Singapore Air Show.

Supported by the Asian Business Aviation Association, organisers are promising the event will be a pivotal gathering for industry leaders, aviation enthusiasts, and business professionals from around the globe. The Expo will showcase the latest advancements, technologies, and innovations in the business aviation sector, with a focus on sustainability, efficiency, and cutting-edge design.

> **«The report projects that large jets are expected vto account for two-thirds of new business jet purchases through 2030»**

The Australian International Air Show is also expected to attract strong attendance from the business aviation sector within the region. The northern hemisphere then takes over in May with the 2025 European Business Aviation Conference & Exhibition (EBACE), scheduled for 20 May in Geneva. At EBACE, the ABAA will meet with other International Business Aviation Council (IBAC) member associations to set priorities for global business aviation in the future.

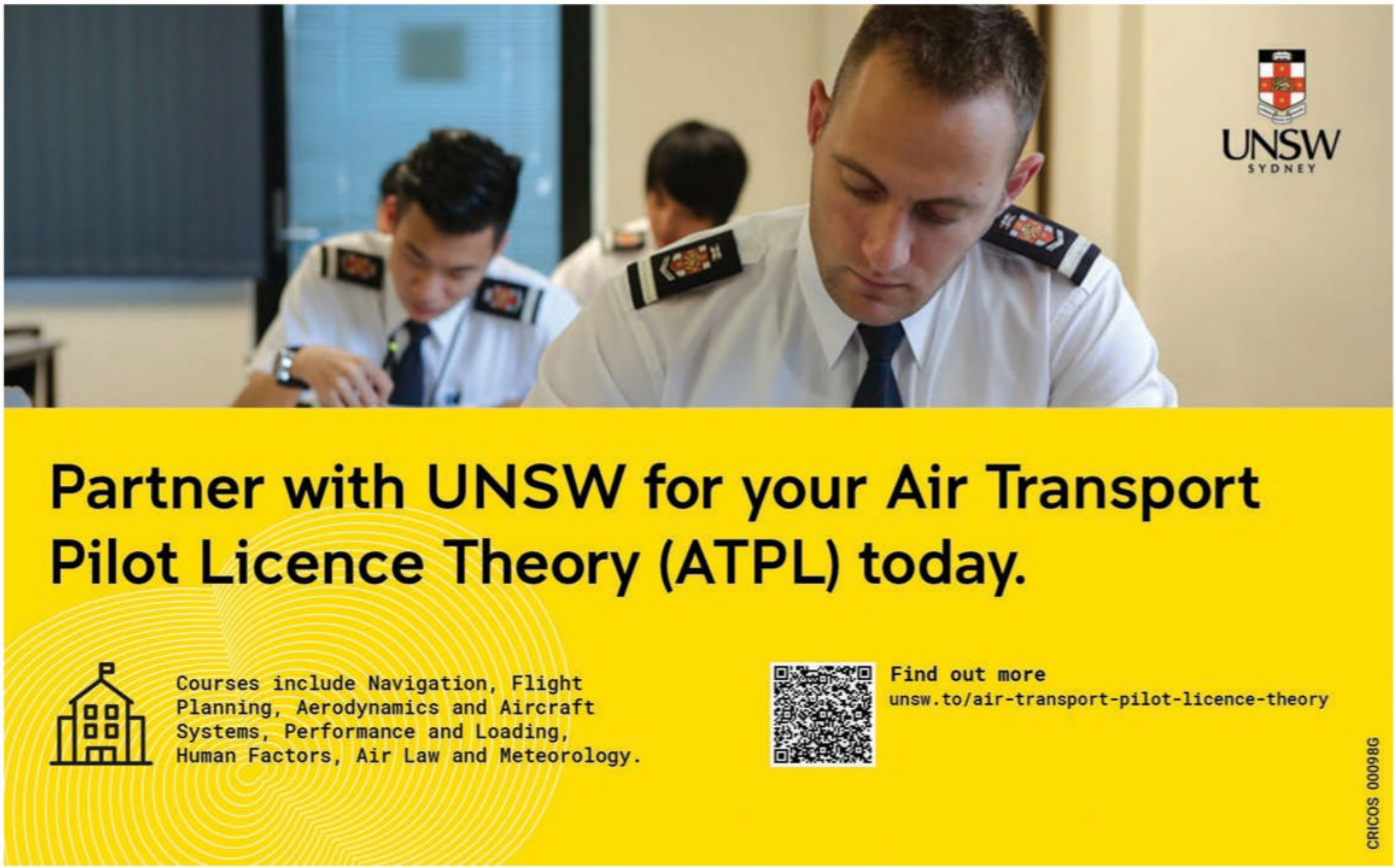
Safety Priorities in Focus

Closer to home, CASA recently announced a Sector Safety Risk Profile Workshop for Australian business aviation. The ABAA welcomes the opportunity to participate and add value to this process, which is designed to assist CASA in building an accurate picture of current and emerging risks.

The association is also eagerly anticipating the release of the National General Aviation Culture and Wellbeing Survey results. In an era of increasing scrutiny of the appropriate management of human factors risks, especially those pertaining to health and well-being, the survey results will hopefully improve awareness and set the tone for further work in this area.

Both initiatives have the potential to provide essential insight and drive tangible safety outcomes, supporting the ongoing safe and sustainable operations of our members within the Australian business community.

The ABAA has also commenced plans for a stand-alone event that will draw on these outcomes and provide a forum for its members to focus on collective safety priorities; more on this in the months ahead.



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What can we learn?

JIM DAVIS

Jim Davis has 15,000 hours of immensely varied flying experience, including 10,000 hours civil and military flying instruction. He is an established author, his current projects being an instructors' manual and a collection of Air Accident analyses, called 'Choose not to Crash'.

The Turning Point

This discussion is to promote safety and not to establish liability.

CAA's report contains padding and repetition, so in the interest of clarity, the author has paraphrased extensively.

Name of Owner/Operator: Dr. T.R. Chamberlain
Aircraft registration: ZS-DVF
Date and time of accident: 16 December 2003; 0515Z
Type of aircraft: PIPER PA 22-108
Type of operation: Private
PIC license type: PPL
License valid: Yes
PIC age: 81
PIC total hours: 4065.2
PIC hours on type 49.2
Last point of departure: Krugersdorp Aerodrome (FAKR)
Point of intended landing: Krugersdorp Aerodrome (FAKR)
Location of accident site: Moedhou Farm, Hartebeesfontein
Meteorological information: 020°/10 knots; 20°C; Viz >10km
POB: 1 + 1
People injured: 0
People killed: 1 + 1

HISTORY OF FLIGHT

The aircraft departed from Krugersdorp on a private flight on the morning of 16 December 2003.

It was observed flying in the Hartebeesfontein area at about 0510Z. The eyewitness said it was at about 300' AGL and was circling over a particular area.

The wind was from the northeast. Prior to impact, the aircraft was flying downwind and then turned south, flying straight and level towards the witness. The engine was operating at a constant speed. The aircraft then turned left, into the wind. The first 90° of the turn seemed normal, followed by a sudden increase in the bank as it dived into the ground.

The pilot was in radio contact with a person on the ground who had a private landing strip on her property, close to where the accident occurred. They were having a casual conversation on 125.8 MHz approximately 10 minutes prior to the accident, as the pilot flew over her property.

The aircraft impacted terrain in a substantial nose-down attitude on a heading of 326°M. No post impact movement was evident on the ground. The forward fuselage section, including the cockpit area and both wings were severely damaged.

MEDICAL INFORMATION

The pilot held a valid Class II aviation medical. No alcohol was found in his blood. According to the post-mortem report both occupants' cause of death was multiple blunt force injuries.

ANALYSIS

The aircraft was properly maintained and no defect or malfunction that could have contributed or have caused the accident was found.

The pilot had been flying for many years and was appropriately rated. There was no indication that incapacitation or physiological factors had affected his performance.

According to the eyewitness, the pilot executed several low-level orbits in the area without any problem. The turn prior to impact was initially uneventful, but then the bank angle increased suddenly and the aircraft dived to the ground.

PROBABLE CAUSE

It is the opinion of the writer that the aircraft stalled with insufficient height to recover.

Jim's comments

This is a very interesting accident for a few reasons. First, the FAA has an exercise in the PPL syllabus, designed specifically to avoid this sort of accident. It's called 'Turning Around a Point' and it's part of a family of exercises called 'Ground Reference Manoeuvres'.

The object of these exercises is to teach you to manoeuvre safely, at low level, in wind, with reference to objects in the surface.

You may think, well I don't really do that. But you actually do it every time you turn on to final approach. The point on the ground is the runway threshold. If you have a tailwind on base you are likely to overshoot the centreline, in what's known as a hammerhead. This is dangerous because you have to tighten this low level, low speed turn to the extent that you could stall.

Aiming to make safer pilots of us, here veteran instructor Jim Davis looks at extracts from official CAA Accident Reports from his homeland of South Africa and analyses why things went wrong and how we may all avoid making similar mistakes.

The aircraft stalled with insufficient height to recover.

SCAAA

Two people died in a Lancair Super ES on the opening day of the Oshkosh airshow on Monday, July 22. The initial evidence points to them stalling during a hammerhead on their base to final turn.

Other ground reference turns are when circling to photograph a building or a herd of animals or a beauty spot. Pilots involved in game capture, advertising or tourism are prone to run into trouble, particularly if there's a strong wind.

The worst day we ever had at 43 Air School was two weeks after an Italian couple left their beautiful young daughter with us for PPL training. The father's final words to Steve Goodrick, our CFI, were "please look after my little girl." I was on holiday in Zim.

Fourteen days later Steve had to phone daddy in Italy to tell him that his daughter was dead. She and her instructor had crashed into the sea in front of scores of holiday makers who were watching a whale.

A month later the aircraft was found when a fishing trawler snagged it. The instructor's body was recovered but the Italian girl was never seen again.

Her parents came out and built a memorial above the beach overlooking the spot where their daughter had disappeared beneath the waves.

CAA's investigation was inconclusive, despite there being many witnesses. It seemed that the aircraft had spiralled down from three or four thousand feet where they had been doing upper air work. It then started circling the whale at low level and suddenly pitched down into the sea.

I spoke to a number of people who had seen the accident – one in particular demonstrated the futility of interviewing eye-witnesses. He said the aeroplane was flying along the beach and he knew it was going to crash because one of its engines was stopped. The aircraft was a 180 Cherokee.

The instructor had fallen into the trap of circling round an object in a strong wind. It was about 25 knots that day.

The danger is that you run out of airspeed on the downwind side of the turn because the high groundspeed deceives you into thinking you have plenty of flying speed.

The exercise "Turning Around a Point" is in the FAA syllabus, however it not part of South African PPL or CPL training. It's partially covered under "Low Flying" during which we teach the pupil to rely on airspeed and ball, and ignore groundspeed and apparent skid and slip while flying a racecourse pattern.

Australia only teaches low flying as part of a separate rating – it's not in the basic license.

Here's what should happen:

> « The instructor had fallen into the trap of circling round an object in a strong wind. It was about 25 knots that day. »

Turns Around a Point

The object is to do a 360° constant radius turn around a surface-based point. The faster your groundspeed the steeper you need to bank, and slower your groundspeed the shallower your bank angle.

You need to:

- Maintain a relationship between the airplane and the ground.
- Divide your attention between the flightpath and the reference point while flying accurately and checking for outside hazards and instrument indications.
- Adjust bank to correct for groundspeed changes. You need a steeper bank as groundspeed increases and a shallower one for decreasing groundspeeds.
- Establish the wind correction angle and adjust it to maintain your track over the ground.
- Develop an awareness of the relationship between turn radius and bank angle.

When you try it, your first 360° will let you assess what's happening. Subsequent turns will improve as you learn to continually adjust the bank with coordinated aileron and rudder.

You should enter the manoeuvre downwind, where the groundspeed is at its fastest. In a high-wing aircraft, the wing may block your view of the point. To prevent this you may need to change the altitude or turn radius.

When you enter the manoeuvre, depending on the wind speed, you may need to bank rapidly so that the steepest bank is established quickly to prevent drifting outside your planned radius. It takes a bit of practice to get this right.

Then you need to gradually decrease bank until you are heading directly into wind. Next, as your turn becomes a crosswind, and then downwind, you have to gradually steepen the bank until the steepest bit is at your initial entry point.

Common faults

- Relying on perceptions instead of airspeed and ball.
- Not clearing the area for safety hazards.
- Not establishing straight and level before starting.
- Not maintaining altitude during the turn.
- Not properly assessing the wind direction and speed.
- Not using the controls smoothly and continuously.
- Not coordinating aileron and rudder, causing slips or skids.

Note: If your bank exceeds 45° you are too close to your point.

If you get all this right you might even earn a pat on your back from that ogre who poses as your instructor.

I have to admit that I almost killed myself when I had about five hours of solo in a J3 Cub. Dirty Bossie, my instructor, sent me off to practice stalls or something. I used the opportunity to circle over our home where my beautiful young wife was waving a dishcloth from the lawn.

The wind was howling and of course I stalled after throttling back while on the downwind part, while pulling the turn too tight.

The gentle yellow aeroplane forgave me when I didn't deserve it.

Take home stuff:

- Don't go low flying
- Really, really really don't go low flying in a wind.

Recreational pilots will soon have the option of training to fly in controlled airspace at places like Bankstown.

IMAGE: COMPOSITE IMAGE STEVE HITCHEN

Professionalism in Control

*With recreational pilots soon to have access to controlled airspace, **Steve Hitchen** anticipates a lift in professionalism from pilots taking up the privilege.*

> « Professionalism is … an attitude more than a qualification. »

In December last year, CASA announced it would approve access to Class C and Class D airspace for holder of Recreational Pilot Certificates. The level of surprise in that move could be measured in microns.

Having already granted the same privilege to PPL and RPL holders flying on Class 5 medical certificates, any justification for continuing to deny controlled airspace access for RPC holders was well and truly dead.

Add to that the overwhelming support of the aviation community displayed in consultation feedback and any surprise could have come only from CASA continuing the CTA/R ban on recreational pilots.

But, when the new policy found its way into the light, it contained a hand grenade: a requirement for RPC holders to qualify and obtain a CASA Class 5 medical. That one condition took all the wind out of the party horns and burst a few balloons.

Here's the mud: to get a Class 5, an RPC holder must also have a CASA Aviation Reference Number (ARN), which puts the pilot on CASA's radar, something that RPCs have revelled in not doing for many years.

Although this is unlikely to be a complete show-stopper, RPCs are asking if access to controlled airspace is worth sacrificing their cloak of invisibility when it comes to CASA. For many, their very reason for being a recreational pilot is that CASA has limited involvement in their aviation environment.

One of the threads of objection running through the consultation feedback is that recreational pilots aren't professional enough to share the airspace with those who are more highly trained. Professionalism is, however, an attitude more than a qualification, and any RPCs tackling controlled airspace training will already have demonstrated a more professional attitude just by the decision to do so.

It can be expected, therefore, that this new professionalism will extinguish any fears about being on CASA's radar, and that should remove any obstacles to qualifying for a Class 5 medical.

Recreational Aviation Australia (RAAus) will also have to take their professionalism onto a new plane if they are to effectively administer members flying into and out of Class C and D airspace. CASA knows that, and watching how RAAus carries itself as an Approved Self-administering Aviation Organisation (ASAO) under Part 149 will have been key to CASA being comfortable to add controlled airspace to their list of approvals.

Flying under ATC control means following instructions, understanding phraseology, being familiar with LAHSO, departure reports at non-radar towers, requirements to be established on track, read-back requirements and pretty much everything in the appropriate section of the AIP.

See all that? That's professionalism. And every pilot no matter what their qualification should always strive to fly a bit more professional.

But, the beauty is that none of this will corrode an RPC's right to stay away from the purple lines and continue on their merry way staying under or outside the radar. That's what RAAus was set up to administer, and branching into controlled airspace will not threaten those that don't want it.

But for those that do want it, stepping up is going to mean a Class 5 medical, a lot of training that is outside their current comfort zone and a general increase in awareness and airmanship.

And something else: confidence. Being confident inside Class C and D comes from good training, good understanding and a want to get it right. The last one generally guarantees the first two, and is maybe the most important of the three.

When you reach that level, you have reached the professionalism that should erase all fears of being on CASA's radar, or Airservices' for that matter.

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